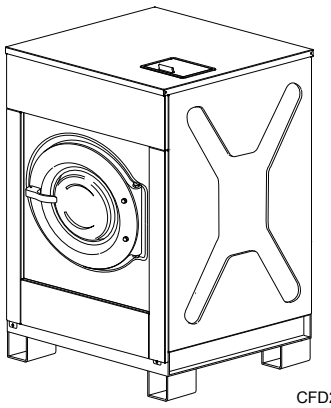
Washer-Extractors

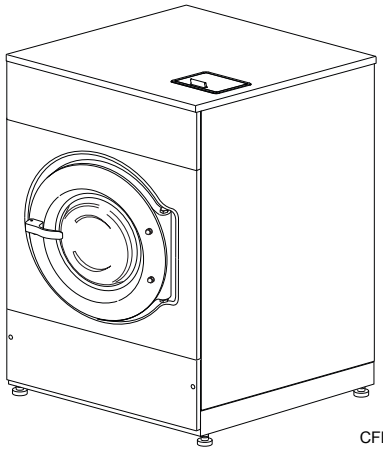
Cabinet Freestanding

Refer to *page 7* for Model Identification



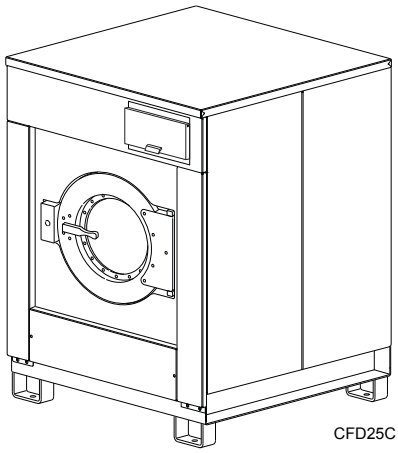
CFD23C

33, 40, 55 and 75 Models



CFD24C

18, 25, 30 and 35 Models



CFD25C

100, 135, 165 and 200 Models

Keep These Instructions for Future Reference.
(If this machine changes ownership, this manual must accompany machine.)

Alliance Laundry Systems

www.alliancelaundry.com

Part No. 9002106ENR4
October 2013

Installation

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Safety Information

Explanation of Safety Messages

Precautionary statements (“DANGER”, “WARNING”, and “CAUTION”), followed by specific instructions, are found in this manual and on machine decals. These precautions are intended for the personal safety of the operator, user, servicer, and those maintaining the machine.

DANGER

DANGER indicates the presence of a hazard that will cause severe personal injury, death, or substantial property damage if the danger is ignored.

WARNING

WARNING indicates the presence of a hazard that can cause severe personal injury, death, or substantial property damage if the warning is ignored.

CAUTION

CAUTION indicates the presence of a hazard that will or can cause minor personal injury or property damage if the caution is ignored.

Additional precautionary statements (“IMPORTANT” and “NOTE”) are followed by specific instructions.

IMPORTANT: The word “IMPORTANT” is used to inform the reader of specific procedures where minor machine damage will occur if the procedure is not followed.

NOTE: The word “NOTE” is used to communicate installation, operation, maintenance or servicing information that is important but not hazard related.

Important Safety Instructions

WARNING

To reduce the risk of fire, electric shock, serious injury or death to persons when using your washer, follow these basic precautions:

W023

1. Read all instructions before using the washer.
2. Install the washer according the INSTALLATION instructions. Refer to the EARTHING (grounding) instructions in the INSTALLATION manual for the proper earthing (grounding) of the washer. All connections for water, drain, electrical power and earthing (grounding) must comply with local codes and be made by licensed personnel when required. It is recommended that the machine be installed by qualified technicians.
3. Do not install or store the washer where it will be exposed to water and/or weather.
4. To prevent fire and explosion, keep the area around machine free from flammable and combustible products. Do not add the following substances or textiles containing traces of the following substances to the wash water: gasoline, kerosene, waxes, cooking oils, vegetable oils, machine oils, dry-cleaning solvents, flammable chemicals, thinners, or other flammable or explosive substances. These substances give off vapors that could ignite, explode or cause the fabric to catch fire by itself.
5. Under certain conditions, hydrogen gas may be produced in a hot water system that has not been used for two weeks or more. HYDROGEN GAS IS EXPLOSIVE. If the hot water system has not been used for such a period, before using a washing machine or combination washer-dryer, turn on all hot water faucets and let the water flow from each for several minutes. This will release any accumulated hydrogen gas. The gas is flammable, do not smoke or use an open flame during this time.
6. To reduce the risk of an electric shock or fire, DO NOT use an extension cord or an adapter to connect the washer to the electrical power source.

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7. Do not allow children to play on or in the washer. Close supervision of children is necessary when the washer is used near children. This appliance is not intended for use by young children or infirm persons without supervision. Young children should be supervised to ensure that they do not play with the appliance. This is a safety rule for all appliances.
8. DO NOT reach and/or climb into the tub or onto the washer, ESPECIALLY if the wash drum is moving. This is an imminently hazardous situation that, if not avoided, will cause severe personal injury or death.
9. Never operate the washer with any guards, panels and/or parts removed or broken. DO NOT bypass any safety devices or tamper with the controls.
10. Use washer only for its intended purpose, washing textiles. Never wash machine parts or automotive parts in the machine. This could result in serious damage to the basket or tub.
11. Use only low-sudsing, no-foaming types of commercial detergent. Be aware that hazardous chemicals may be present. Wear hand and eye protection when adding detergents and chemicals. Always read and follow manufacturer's instructions on packages of laundry and cleaning aids. Heed all warnings or precautions. To reduce the risk of poisoning or chemical burns, keep them out of the reach of children at all times (preferably in a locked cabinet).
12. Do not use fabric softeners or products to eliminate static unless recommended by the manufacturer of the fabric softener or product.
13. Always follow the fabric care instructions supplied by the textile manufacturer.
14. Loading door MUST BE CLOSED any time the washer is to fill, tumble or spin. DO NOT bypass the loading door switch by permitting the washer to operate with the loading door open. Do not attempt to open the door until the washer has drained and all moving parts have stopped.
15. Be aware that hot water is used to flush the supply dispenser. Avoid opening the dispenser lid while the machine is running.
16. Do not attach anything to the supply dispenser's nozzles, if applicable. The air gap must be maintained.
17. Do not operate the machine without the water reuse plug or water reuse system in place, if applicable.
18. Be sure water connections have a shut-off valve and that fill hose connections are tight. CLOSE the shut-off valves at the end of each wash day.
19. Keep washer in good condition. Bumping or dropping the washer can damage safety features. If this occurs, have washer checked by a qualified service person.
20. DANGER: Before inspecting or servicing machine, power supply must be turned OFF. The servicer needs to wait for at least 10 minutes after turning the power OFF and needs to check for residual voltage with a voltage meter. The inverter capacitor or EMC filter remains charged with high voltage for some time after powering OFF. This is an imminently hazardous situation that, if not avoided, will cause severe personal injury or death.
21. Do not repair or replace any part of the washer, or attempt any servicing unless specifically recommended in the user-maintenance instructions or in published user-repair instructions that the user understands and has the skills to carry out. ALWAYS disconnect the washer from electrical, power and water supplies before attempting any service.
22. Disconnect the power cord by grasping the plug, not the cord. Replace worn power cords and/or loose plugs. If the supply cord is damaged, it must be replaced by a special cord or assembly available from the service agent.
23. Before the washer is removed from service or discarded, remove the door to the washing compartment.
24. Failure to install, maintain, and/or operate this washer according to the manufacturer's instructions may result in conditions which can produce bodily injury and/or property damage.

NOTE: The WARNINGS and IMPORTANT SAFETY INSTRUCTIONS appearing in this manual are not meant to cover all possible conditions and situations that may occur. Common sense, caution and care must be exercised when installing, maintaining, or operating the washer.

Always contact your dealer, distributor, service agent or the manufacturer on any problems or conditions you do not understand.

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WARNING

This machine must be installed, adjusted, and serviced by qualified electrical maintenance personnel familiar with the construction and operation of this type of machinery. They must also be familiar with the potential hazards involved. Failure to observe this warning may result in personal injury and/or equipment damage, and may void the warranty.

SW004

IMPORTANT: Ensure that the recommended clearances for inspection and maintenance are provided. Never allow the inspection and maintenance space to be blocked.

WARNING

Never touch internal or external steam pipes, connections, or components. These surfaces can be extremely hot and will cause severe burns. The steam must be turned off and the pipe, connections, and components allowed to cool before the pipe can be touched.

SW014

Safety Decals

Safety decals appear at crucial locations on the machine. Failure to maintain legible safety decals could result in injury to the operator or service technician.

Use manufacturer-authorized spare parts to avoid safety hazards.

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Introduction

Model Identification

Information in this manual is applicable to these models:

18	HX018PVQM7	NX018BVXA7	SX018BVPA7	SX18BVXM7	UX018PVQA7	UX18PVQA6
	HX018PVXM7	NX018BVXM7	SX018BVQA7	SX18PVPA7	UX018PVQM7	UX18PVQA7
	HX18PVQM6	NX18BVPA6	SX018BVXA7	SX18PVQM6	UX018PVXA7	UX18PVQM6
	HX18PVQM7	NX18BVPA7	SX018BVXM7	SX18PVQM7	UX018PVXM7	UX18PVQM7
	HX18PVQU6	NX18BVQA6	SX018PVPA7	SX18PVQU6	UX18PVNA6	UX18PVQU6
	HX18PVXM6	NX18BVQA7	SX018PVQM7	SX18PVXM6	UX18PVNA7	UX18PVXA6
	HX18PVXM7	NX18BVXA6	SX018PVXM7	SX18PVXM7	UX18PVNU6	UX18PVXA7
	HX18PVXU6	NX18BVXA7	SX18BVPA7	SX18PVXU6	UX18PVPA6	UX18PVXM6
	NX018BVPA7	NX18BVXM6	SX18BVQA7	UX018PVNA7	UX18PVPA7	UX18PVXM7
	NX018BVQA7	NX18BVXM7	SX18BVXA7	UX018PVPA7	UX18PVPU6	UX18PVXU6
25	HX025PVQM7	HX25PVXU6	SX25PVXM7	UX025PVXM7	UX25PVQA6	UX25PVXM6
	HX025PVXM7	SX025PVQM7	SX25PVXU6	UX25PVNA6	UX25PVQA7	UX25PVXM7
	HX25PVQM6	SX025PVXM7	UX025PVNA7	UX25PVNA7	UX25PVQM6	UX25PVXU6
	HX25PVQM7	SX25PVQM6	UX025PVPA7	UX25PVNU6	UX25PVQM7	
	HX25PVQU6	SX25PVQM7	UX025PVQA7	UX25PVPA6	UX25PVQU6	
	HX25PVXM6	SX25PVQU6	UX025PVQM7	UX25PVPA7	UX25PVXA6	
	HX25PVXM7	SX25PVXM6	UX025PVXA7	UX25PVPU6	UX25PVXA7	
30	NX030BVPA7	NX30BVPA6	NX30BVXA6	SX030BVPA7	SX30BVPA7	
	NX030BVQA7	NX30BVPA7	NX30BVXA7	SX030BVQA7	SX30BVQA7	
	NX030BVXA7	NX30BVQA6	NX30BVXM6	SX030BVXA7	SX30BVXA7	
	NX030BVXM7	NX30BVQA7	NX30BVXM7	SX030BVXM7	SX30BVXM7	
33	SX33BVPA7	SX33BVXA7	UX33PVNA7	UX33PVQA7	UX33PVXA7	
	SX33BVQA7	SX33BVXM7	UX33PVPA7	UX33PVQM7	UX33PVXM7	
35	HX035PVQM7	HX35PVXU6	SX35PVQU6	UX035PVQM7	UX35PVPA7	UX35PVXA6
	HX035PVXM7	SX035PVNM7	SX35PVXM6	UX035PVXA7	UX35PVPU6	UX35PVXA7
	HX35PVQM6	SX035PVQM7	SX35PVXM7	UX035PVXM7	UX35PVQA6	UX35PVXM6
	HX35PVQM7	SX035PVXM7	SX35PVXU6	UX35PVNA6	UX35PVQA7	UX35PVXM7
	HX35PVQU6	SX35PVNM7	UX035PVNA7	UX35PVNA7	UX35PVQM6	UX35PVXU6
	HX35PVXM6	SX35PVQM6	UX035PVPA7	UX35PVNU6	UX35PVQM7	
	HX35PVXM7	SX35PVQM7	UX035PVQA7	UX35PVPA6	UX35PVQU6	
40	SX40BVPA7	SX40BVXA7	UX40PVNA7	UX40PVQA7	UX40PVXA7	
	SX40BVQA7	SX40BVXM7	UX40PVPA7	UX40PVQM7	UX40PVXM7	
55	HX055PVNU7	HX55PVQU7	SX055PVXU7	SX55PVQU7	UX055PVXF7	UX55PVQU6
	HX055PVQU7	HX55PVXU6	SX55PVNU6	SX55PVXU6	UX055PVXU7	UX55PVQU7
	HX055PVXU7	HX55PVXU7	SX55PVNU7	SX55PVXU7	UX55PVNU6	UX55PVXF6
	HX55PVNU6	SX055PVNU7	SX55PVPU6	UX055PVNU7	UX55PVNU7	UX55PVXF7
	HX55PVNU7	SX055PVPU7	SX55PVPU7	UX055PVPU7	UX55PVPU6	UX55PVXU6
	HX55PVQU6	SX055PVQU7	SX55PVQU6	UX055PVQU7	UX55PVPU7	UX55PVXU7
75	HX075PVNU7	HX75PVPU7	SX075PVQU7	SX75PVQU7	UX75PVNU7	
	HX075PVPU7	HX75PVQU6	SX75PVNU6	UX075PVNU7	UX75PVPU6	
	HX075PVQU7	HX75PVQU7	SX75PVNU7	UX075PVPU7	UX75PVPU7	
	HX75PVNU6	SX075PVNU7	SX75PVPU7	UX075PVQU7	UX75PVQU6	
	HX75PVNU7	SX075PVPU7	SX75PVQU6	UX75PVNU6	UX75PVQU7	

(continued)

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(continued)

100	HX100 HX100PVNU6 HX100PVNU7 HX100PVPU7	HX100PVQU6 HX100PVQU7 SX100 SX100PVNU6	SX100PVNU7 SX100PVPU7 SX100PVQU6 SX100PVQU7	UX100 UX100PVNU6 UX100PVNU7 UX100PVPU6	UX100PVPU7 UX100PVQU6 UX100PVQU7	
135	HX135 HX135PVNU6 HX135PVNU7 HX135PVPU7	HX135PVQU6 HX135PVQU7 SX135 SX135PVNU6	SX135PVNU7 SX135PVPU7 SX135PVQU6 SX135PVQU7	UX135 UX135PVNU6 UX135PVNU7 UX135PVPU6	UX135PVPU7 UX135PVQU6 UX135PVQU7	
165	HX165 HX165PVNU6 HX165PVNU7 HX165PVPU7	HX165PVQU6 HX165PVQU7 SX165 SX165PVNU6	SX165PVNU7 SX165PVPU7 SX165PVQU6 SX165PVQU7	UX165 UX165PVNU6 UX165PVNU7 UX165PVPU6	UX165PVPU7 UX165PVQU6 UX165PVQU7	
200	HX200 HX200PVNU7	HX200PVPU7 HX200PVQU7	SX200 SX200PVNU7	SX200PVPU7 SX200PVQU7	UX200 UX200PVNU7	UX200PVPU7 UX200PVQU7

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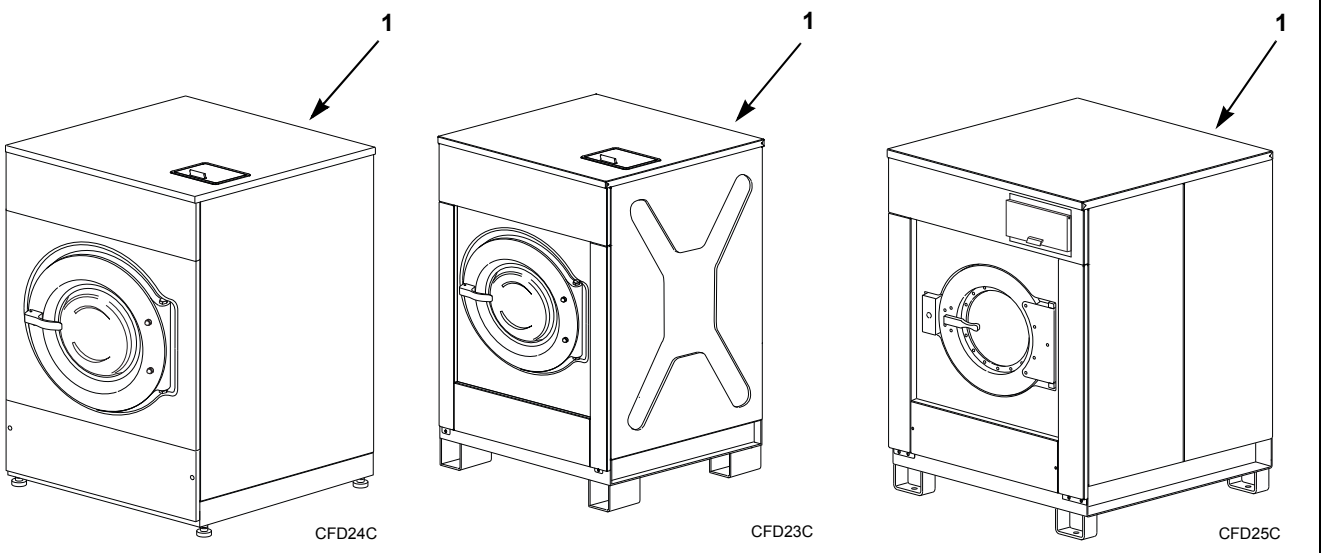
Nameplate Location

The nameplate is located at the rear of the machine. Always provide the machine's serial number and model number when ordering parts or when seeking technical assistance. Refer to *Figure 1*.



1 Nameplate

Figure 1

Replacement Parts

If literature or replacement parts are required, contact the source from which the machine was purchased or contact Alliance Laundry Systems at +1 (920) 748-3950 for the name and address of the nearest authorized parts distributor.

Customer Service

For technical assistance, contact your local distributor or contact:

Alliance Laundry Systems
Shepard Street
P.O. Box 990
Ripon, Wisconsin 54971-0990
U.S.A.

www.alliancelaundry.com

Phone: +1 (920) 748-3121

+32 56 41 20 54

Wevelgem, Belgium

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Specifications and Dimensions

General Specifications						
Model	**18**	**25**	**30**	**33**	**35**	**40**
Overall Dimensions						
Overall width	25.98 in. (660 mm)	25.98 in. (660 mm)	30.71 in. (780 mm)	30.71 in. (780 mm)	30.71 in. (780 mm)	30.71 in. (780 mm)
Overall height	40.9 in. (1038 mm)	40.9 in. (1038 mm)	47.3 in. (1202 mm)	53.1 in. (1348 mm)	47.3 in. (1202 mm)	53.1 in. (1348 mm)
Overall depth	28.6 in. (727 mm)	32.6 in. (827 mm)	32.1 in. (816 mm)	29.6 in. (753 mm)	36.1 in. (916 mm)	33.6 in. (853 mm)
Weight and Shipping Information						
Net weight †	481 lb. (218 kg)	525 lb. (238 kg)	789 lb. (358 kg)	811 lb. (368 kg)	800 lb. (363 kg)	862 lb. (391 kg)
Net weight ††	520 lb. (236 kg)	531 lb. (241 kg)	N/A	N/A	765 lb. (347 kg)	N/A
Shipping weight †	514 lb. (233 kg)	564 lb. (256 kg)	818 lb. (371 kg)	844 lb. (383 kg)	849 lb. (385 kg)	922 lb. (418 kg)
Shipping weight ††	624 lb. (283 kg)	639 lb. (290 kg)	N/A	N/A	1030 lb. (467 kg)	N/A
Shipping volume	28 ft^3 (0.8 m^3)	31.8 ft^3 (0.9 m^3)	45.9 ft^3 (1.3 m^3)	42.7 ft^3 (1.21 m^3)	45.9 ft^3 (1.3 m^3)	45.9 ft^3 (1.3 m^3)
Wash Cylinder Information						
Cylinder diameter	20.9 in. (530 mm)	20.9 in. (530 mm)	25.6 in. (650 mm)	26.8 in. (680 mm)	25.6 in. (650 mm)	26.8 in. (680 mm)
Cylinder depth	13.0 in. (330 mm)	17.3 in. (440 mm)	15.7 in. (400 mm)	15.7 in. (400 mm)	19.7 in. (500 mm)	19.7 in. (500 mm)
Cylinder volume	2.7 ft^3 (73 l)	3.43 ft^3 (95 l)	4.66 ft^3 (132 l)	5.12 ft^3 (145 l)	5.9 ft^3 (165 l)	6.39 ft^3 (181 l)
Perforation size	0.1 in. (3 mm)	0.1 in. (3 mm)	0.1 in. (3 mm)	0.1 in. (3 mm)	0.1 in. (3 mm)	0.1 in. (3 mm)
Door Opening Information						
Door opening size	11.8 in. (300 mm)	11.8 in. (300 mm)	11.8 in. (300 mm)	15.7 in. (400 mm)	11.8 in. (300 mm)	15.7 in. (400 mm)
Height of door bottom above floor	10.8 in. (275 mm)	10.8 in. (275 mm)	14.8 in. (375 mm)	18.5 in. (470 mm)	14.8 in. (375 mm)	18.5 in. (470 mm)

† For Models with A or M in the 8th Position (e.g. *X18PVXA6) or 9th Position (e.g. *X018PVXA7) of the model number
†† For Models with U in the 8th Position (e.g *X18PVXU6) or 9th Position (e.g. *X018PVXU7) of the model number

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General Specifications						
Model	**18**	**25**	**30**	**33**	**35**	**40**
Drive Train Information						
Number of motors in drive train	1	1	1	1	1	1
Drive motor power	1 HP (0.75 kW)	1 HP (0.75 kW)	2 HP (1.5 kW)	2.95 HP (2.2 kW)	2 HP (1.5 kW)	2.95 HP (2.2 kW)
Cylinder Speeds						
Wash/reverse speed	10-50 RPM	10-50 RPM	10-50 RPM	10-50 RPM	10-50 RPM	10-50 RPM
Distribution/drain speed	85 RPM	82 RPM	85 RPM	85 RPM	74 RPM	85 RPM
Extract speed	250-1000 RPM	250-1000 RPM	250-1000 RPM	250-1000 RPM	250-1000 RPM	250-1000 RPM
Centrifugal Force Data						
Wash/reverse centrifugal force	0.03-0.74 Gs	0.03-0.74 Gs	0.4-0.91 Gs	0.37-0.94 Gs	0.04-0.91 Gs	0.37-0.94 Gs
Extract centrifugal force	19-296 Gs	19-296 Gs	23-363 Gs	24-377 Gs	23-363 Gs	24-377 Gs
Balance Detection						
Vibration safety switch installed	Standard	Standard	Standard	Standard	Standard	Standard
Direct Steam Heating (Optional)						
Steam inlet connection size	3/8 in. (10 mm)	3/8 in. (10 mm)	3/8 in. (10 mm)	3/8 in. (10 mm)	3/8 in. (10 mm)	3/8 in. (10 mm)
Number of steam inlets	1	1	1	1	1	1

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General Specifications						
Model	**55**	**75**	**100**	**135**	**165**	**200**
Overall Dimensions						
Overall width	35.4 in. (900 mm)	41.7 in. (1060 mm)	47.24 in. (1200 mm)	47.24 in. (1200 mm)	51.2 in. (1300 mm)	51.2 in. (1300 mm)
Overall height	60.2 in. (1528 mm)	61.3 in. (1558 mm)	75.6 in. (1920 mm)	75.6 in. (1920 mm)	82.7 in. (2100 mm)	82.7 in. (2100 mm)
Overall depth	39.8 in. (1010 mm)	45.3 in. (1150 mm)	52.75 in. (1340 mm)	59.4 in. (1510 mm)	64.1 in. (1628 mm)	71.2 in. (1808 mm)
Weight and Shipping Information						
Net weight	1177 lb. (534 kg)	1612 lb. (731 kg)	3521 lb. (1597 kg)	3940 lb. (1787 kg)	4960 lb. (2250 kg)	6393 lb. (2900 kg)
Shipping weight	1287 lb. (584 kg)	1722 lb. (781 kg)	3741 lb. (1697 kg)	4160 lb. (1887 kg)	5181 lb. (2350 kg)	6614 lb. (3000 kg)
Shipping volume	53 ft^3 (1.5 m^3)	74 ft^3 (2.1 m^3)	116.5 ft^3 (3.3 m^3)	131 ft^3 (3.7 m^3)	155 ft^3 (4.4 m^3)	218 ft^3 (6.17 m^3)
Wash Cylinder Information						
Cylinder diameter	29.5 in. (750 mm)	33.5 in. (850 mm)	38.6 in. (980 mm)	38.6 in. (980 mm)	43.1 in. (1095 mm)	43.1 in. (1095 mm)
Cylinder depth	20.9 in. (530 mm)	21.1 in. (537 mm)	23.5 in. (597 mm)	30.5 in. (775 mm)	30.5 in. (775 mm)	37.7 in. (957 mm)
Cylinder volume	8.27 ft^3 (234 l)	10.76 ft^3 (304 l)	15.92 ft^3 (455 l)	20.66 ft^3 (575 l)	25.8 ft^3 (730 l)	31.748 ft^3 (900 l)
Perforation size	0.1 in. (3 mm)	0.1 in. (3 mm)	0.1 in. (3 mm)	0.1 in. (3 mm)	0.1 in. (3 mm)	0.1 in. (3 mm)
Door Opening Information						
Door opening size	15.7 in. (400 mm)	15.7 in. (400 mm)	19.7 in. (500 mm)	19.7 in. (500 mm)	24.5 in. (622 mm)	24.5 in. (622 mm)
Height of door bottom above floor	20.9 in. (530 mm)	22.2 in. (565 mm)	25.1 in. (638 mm)	25.1 in. (638 mm)	23.7 in. (603 mm)	23.7 in. (603 mm)

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General Specifications						
Model	**55**	**75**	**100**	**135**	**165**	**200**
Drive Train Information						
Number of motors in drive train	1	1	1	1	1	1
Drive motor power	4 HP (3 kW)	5.4 HP (4 kW)	7.4 HP (5.5 kW)	10 HP (7.5 kW)	15 HP (11 kW)	20 HP (15 kW)
Cylinder Speeds						
Wash/reverse speed	10-50 RPM	10-50 RPM	10-50 RPM	10-50 RPM	10-50 RPM	10-50 RPM
Distribution/drain speed	69 RPM	65 RPM	61 RPM	61 RPM	100 RPM	80 RPM
Extract speed	250-1000 RPM	250-1000 RPM	250-800 RPM	250-800 RPM	250-750 RPM	250-750 RPM
Centrifugal Force Data						
Wash/reverse centrifugal force	0.04-1.05 Gs	0.05-1.19 Gs	0.06-1.37 Gs	0.06-1.37 Gs	0.06-1.52 Gs	0.06-1.52 Gs
Extract centrifugal force	26-418 Gs	30-475 Gs	34-350 Gs	34-350 Gs	34-350 Gs	34-350 Gs
Balance Detection						
Vibration safety switch installed	Standard	Standard	Standard	Standard	Standard	Standard
Direct Steam Heating (Optional)						
Steam inlet connection size	1/2 in. (13 mm)	1/2 in. (13 mm)	1/2 in. (13 mm)	1/2 in. (13 mm)	3/4 in. (19 mm)	3/4 in. (19 mm)
Number of steam inlets	1	1	1	1	1	1

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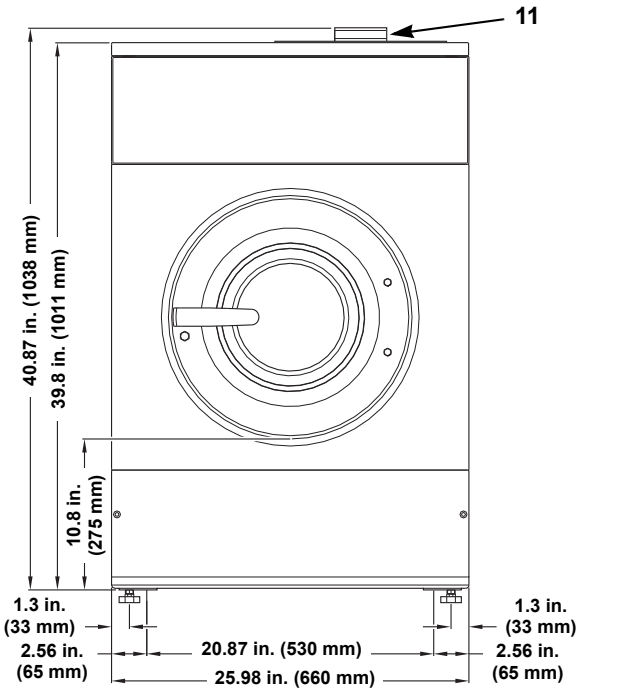

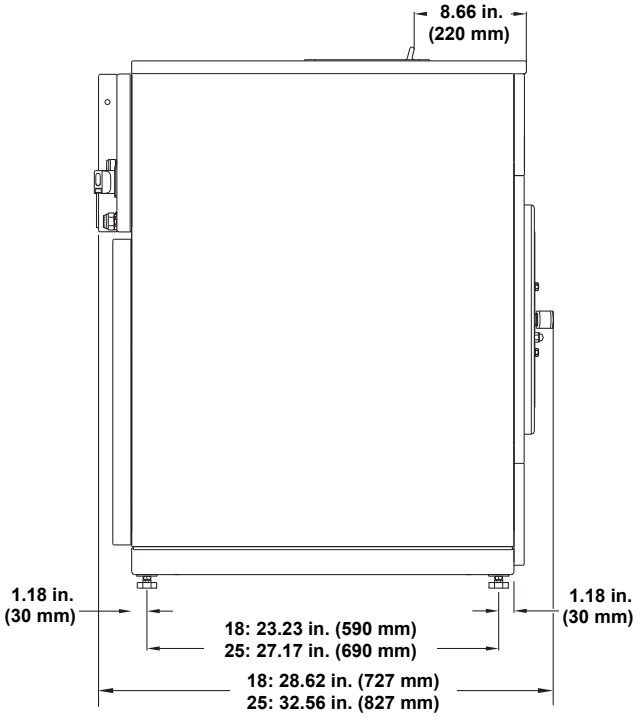

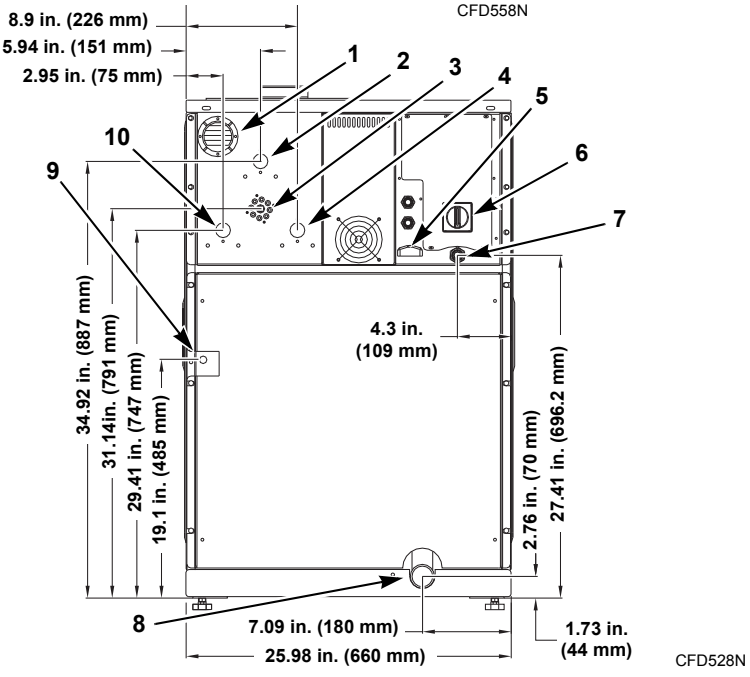

18 AND 25 POUND CAPACITY MODELS

1	Fill and Supply Ventilation	**7**	Electrical Power Input
2	Cold Water Inlet (Required)	**8**	Drain Outlet
3	External Liquid Supply Inlets	**9**	Steam Connection Input (Optional)
4	Hot Water Inlet (Required)	**10**	Cold Water Inlet (Required)
5	Ventilation Tub	**11**	Flushing Supply Dispenser
6	Main Switch		

Figure 2

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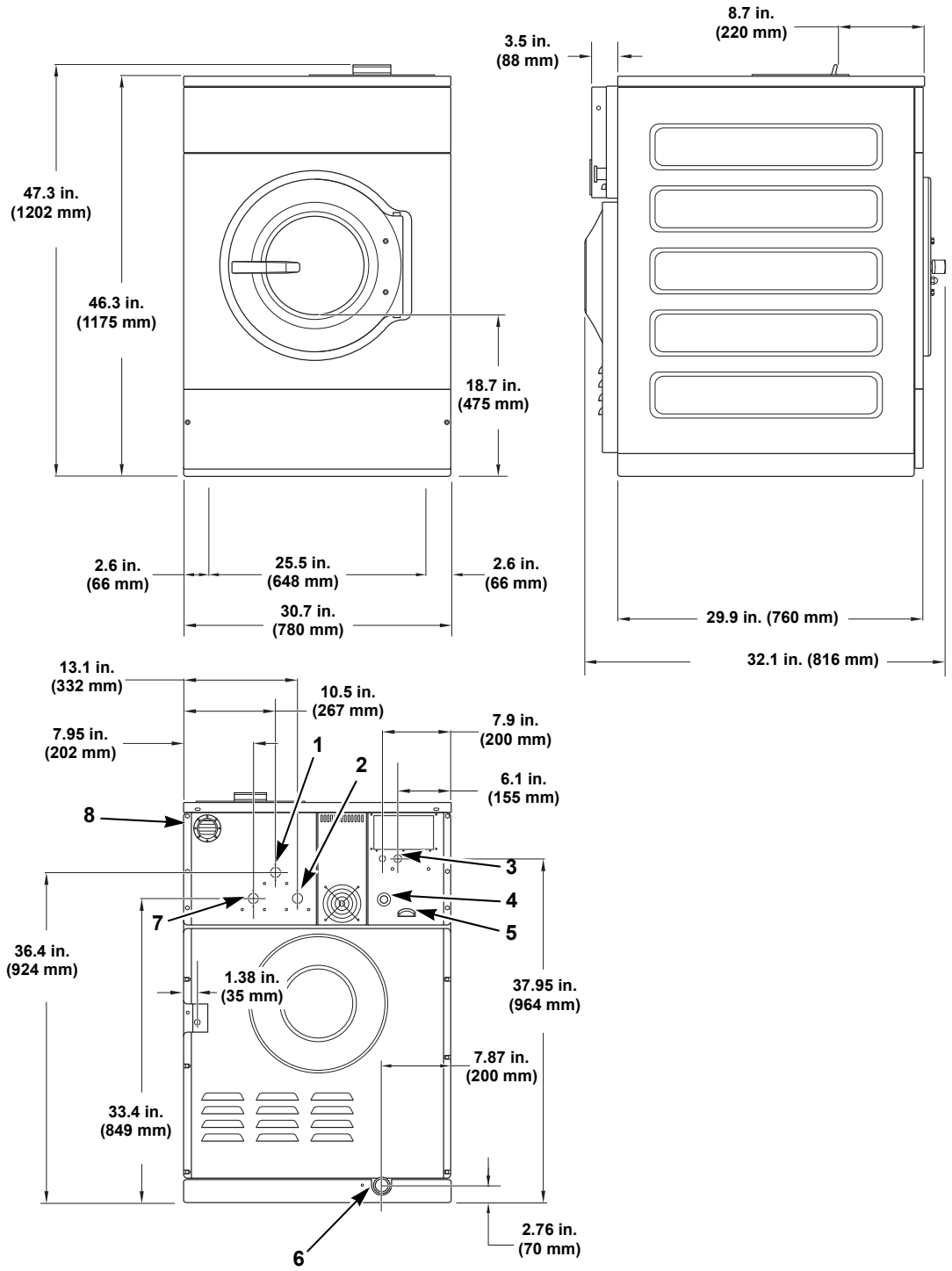

30 POUND CAPACITY MODELS

CFD778N

1	Hot Water Connections .75 in. (19 mm)	**5**	Ventilation Tub
2	Cold Water Inlet (required) .75 in. (19 mm)	**6**	Drain Outlet
3	Power Input	**7**	Cold Water Inlet (required) .75 in. (19 mm)
4	Emergency Stop Button	**8**	Fill and Supply Ventilation

Figure 3

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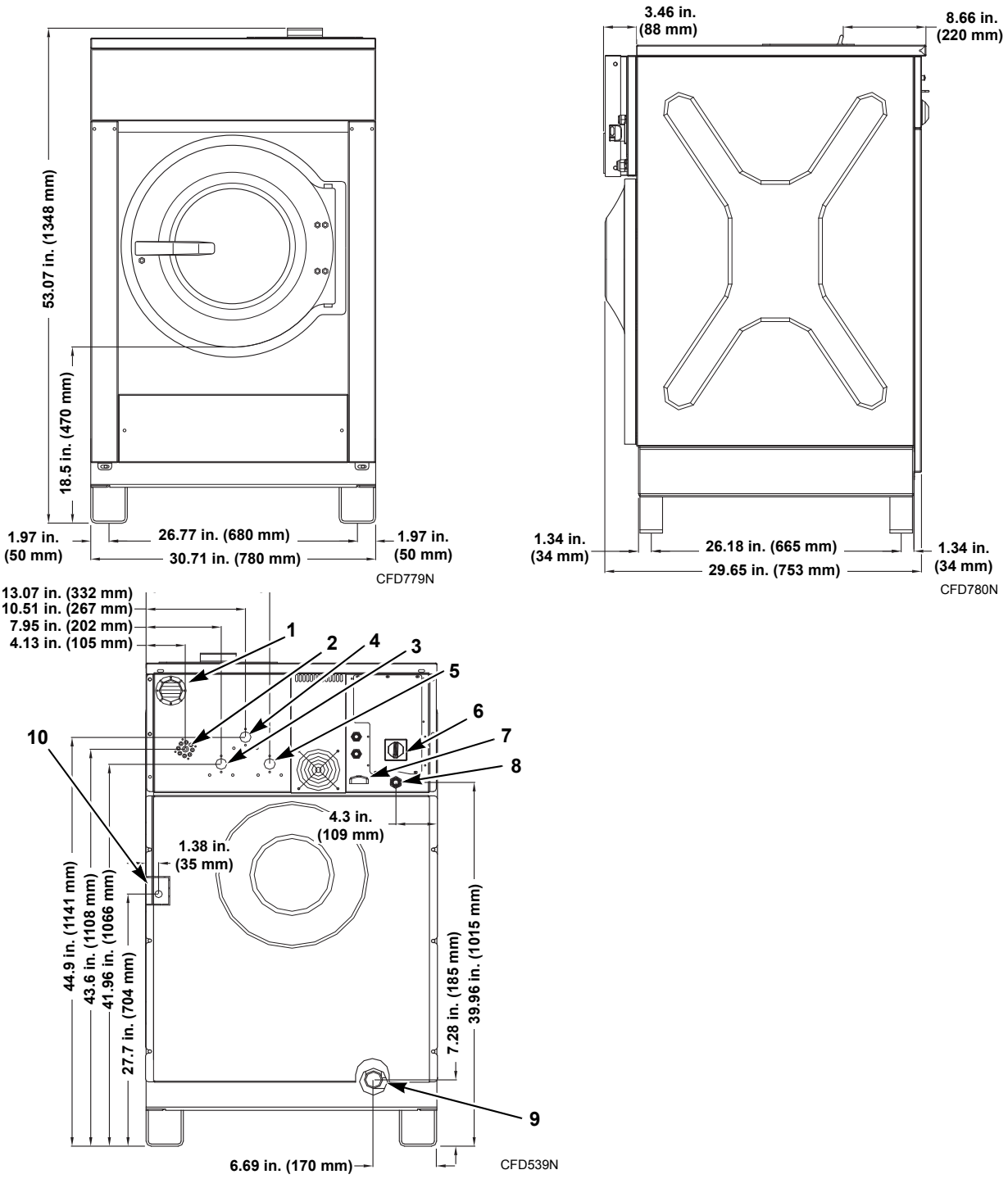

33 POUND CAPACITY MODELS

1	Fill and Supply Ventilation	**6**	Connection Clamps
2	External Liquid Supply Inlets	**7**	Ventilation Tub
3	Cold Water Inlet (Required)	**8**	Electrical Power Inputs
4	Cold Water Inlet (Required)	**9**	Drain Valve
5	Hot Water Inlet (Required)	**10**	Steam Connection Input (Optional)

Figure 4

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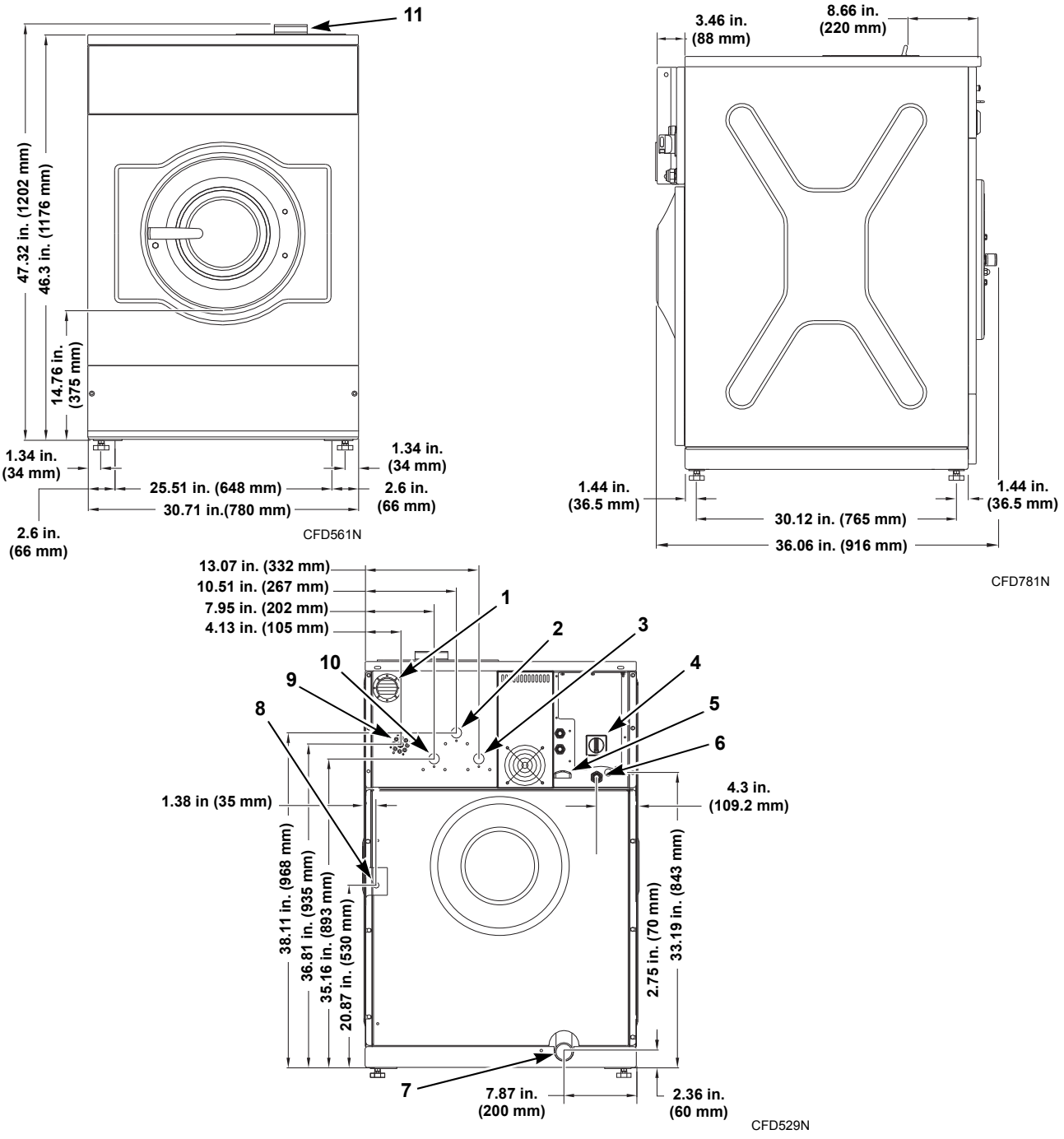

35 POUND CAPACITY MODELS

1	Fill and Supply Ventilation	**7**	Drain Outlet
2	Hot Water Inlet (Required)	**8**	Steam Connection Input (Optional)
3	Cold Water Inlet (Required)	**9**	External Liquid Supply Inlets
4	Main Switch	**10**	Cold Water Inlet (Required)
5	Ventilation Tub	**11**	Flushing Supply Dispenser
6	Electrical Power Input		

Figure 5

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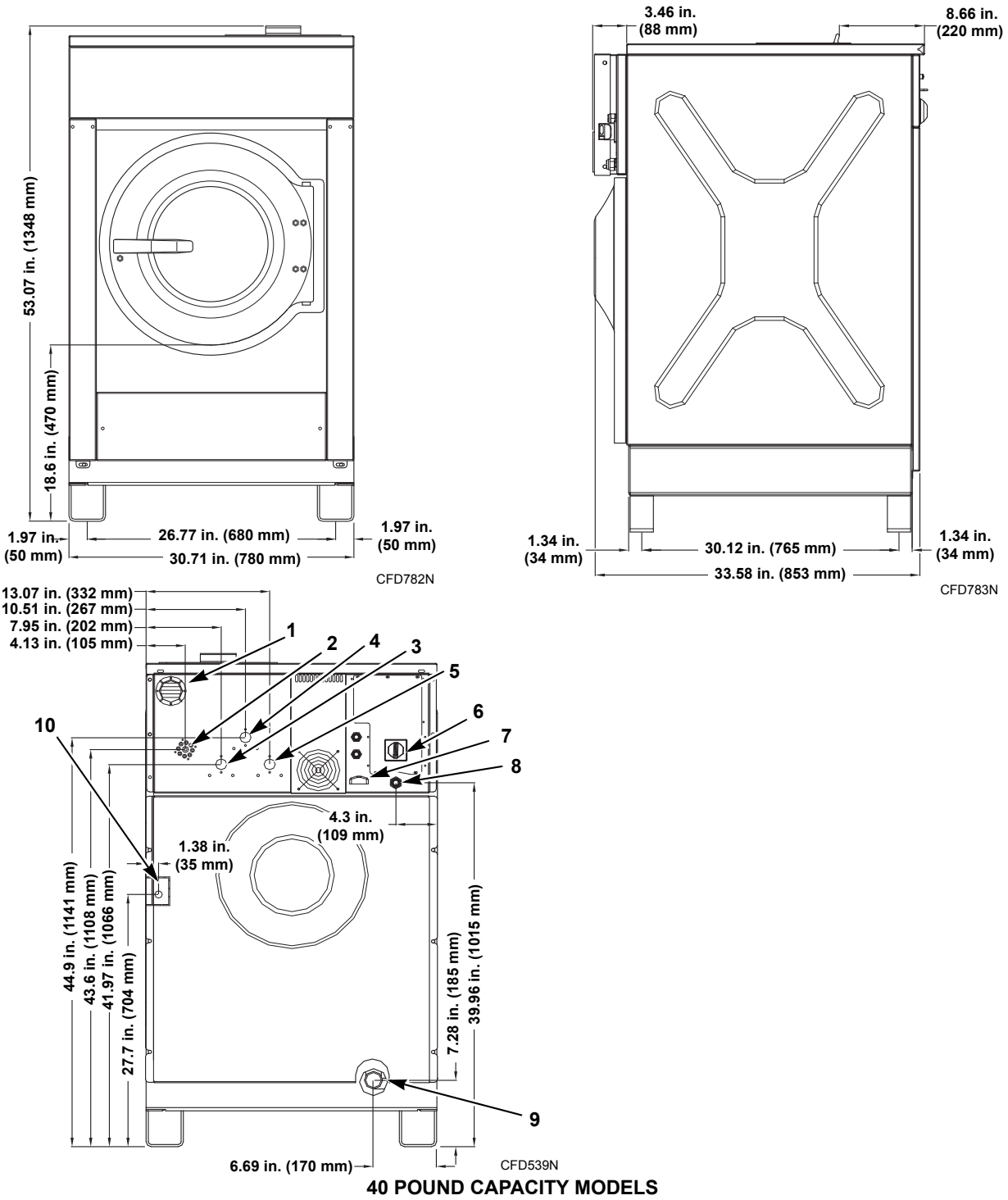

40 POUND CAPACITY MODELS

1	Fill and Supply Ventilation	**6**	Connection Clamps
2	External Liquid Supply Inlets	**7**	Ventilation Tub
3	Cold Water Inlet (Required)	**8**	Electrical Power Inputs
4	Cold Water Inlet (Required)	**9**	Drain Valve
5	Hot Water Inlet (Required)	**10**	Steam Connection Input (Optional)

Figure 6

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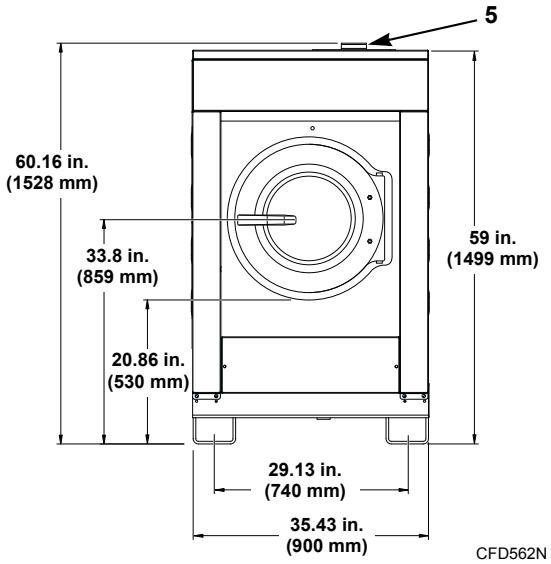

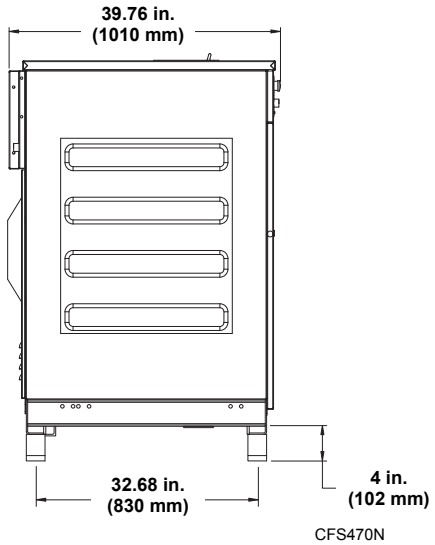

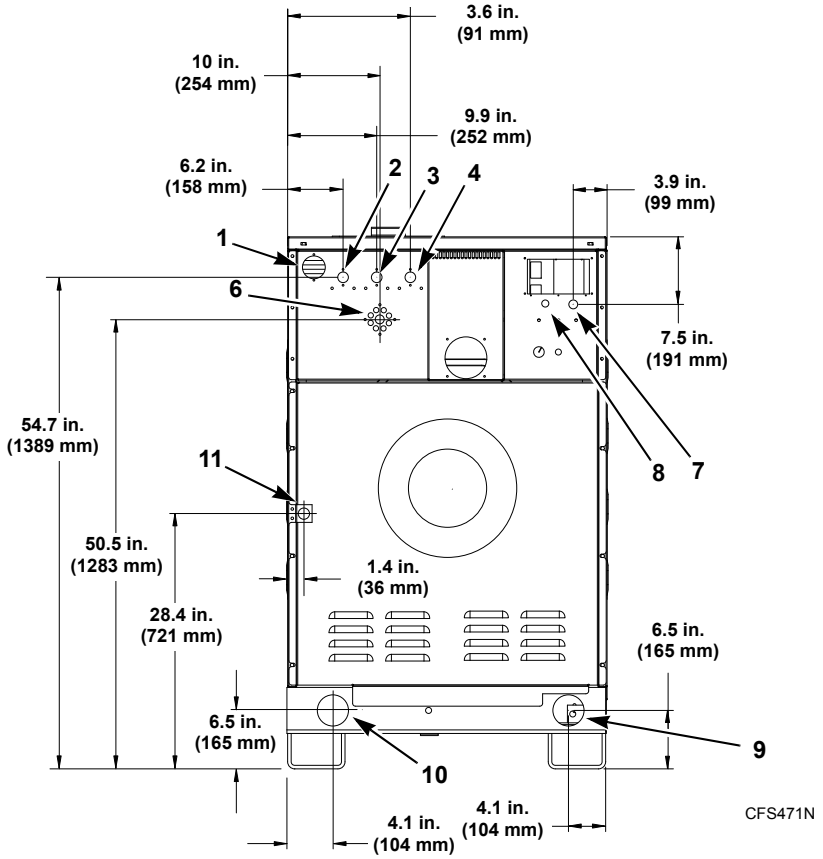

55 POUND CAPACITY MODELS

1	Fill and Supply Ventilation
2	Cold Water Inlet (Required)
3	Hot Water Inlet (Required)
4	Cold Water Inlet (Required)
5	Flushing Supply Dispenser
6	External Liquid Supply Inlets
7	Electrical Power Input
8	External Supply Signal Input
9	Drain Outlet
10	Reuse Drain Outlet (Optional)
11	Steam Connection Input (Optional)

Figure 7

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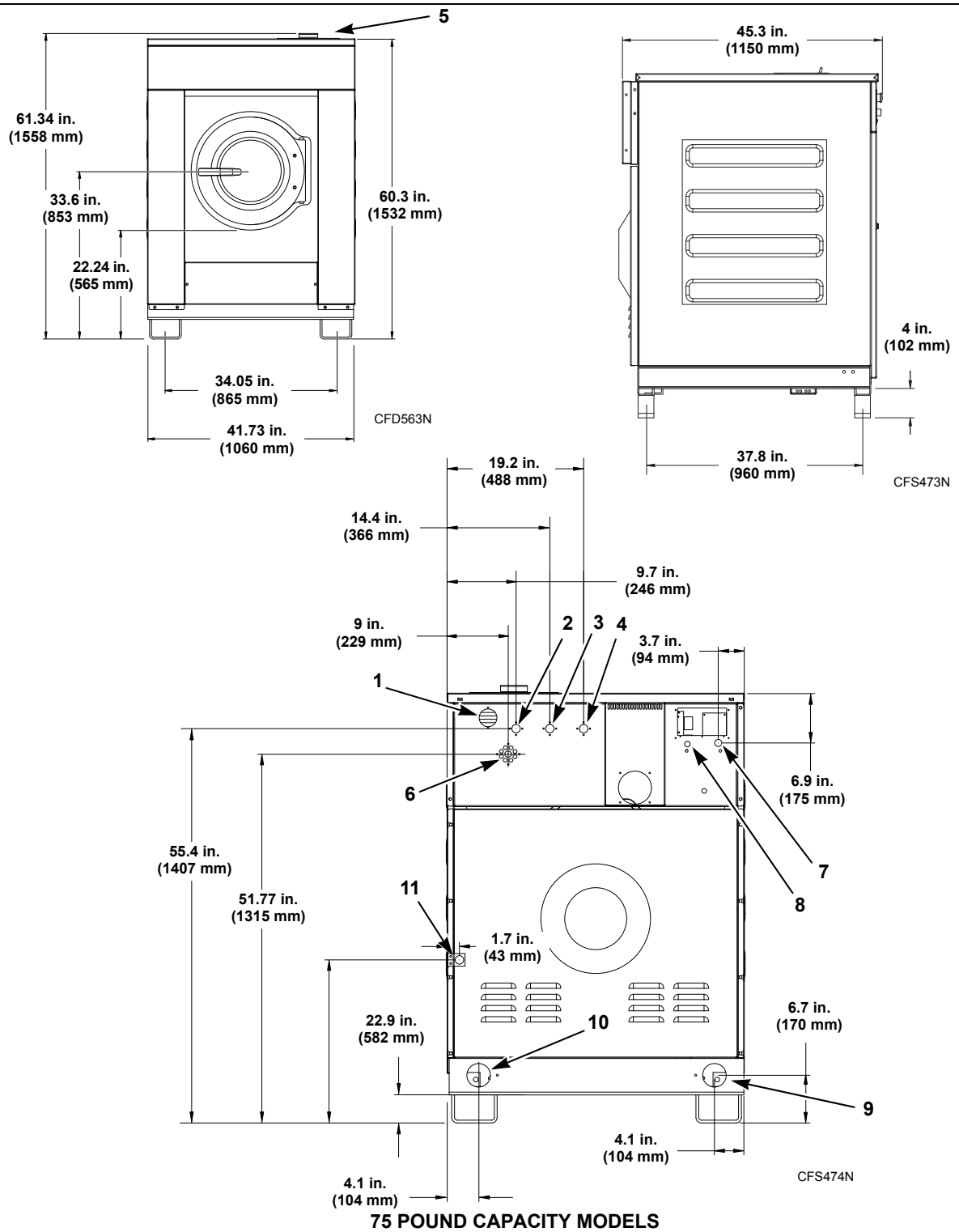

75 POUND CAPACITY MODELS

1	Fill and Supply Ventilation	**7**	Electrical Power Input
2	Cold Water Inlet (Required)	**8**	External Supply Signal Input
3	Hot Water Inlet (Required)	**9**	Drain Outlet
4	Cold Water Inlet (Required)	**10**	Reuse Drain Outlet (Optional)
5	Flushing Supply Dispenser	**11**	Steam Connection Input (Optional)
6	External Liquid Supply Inlets		

Figure 8

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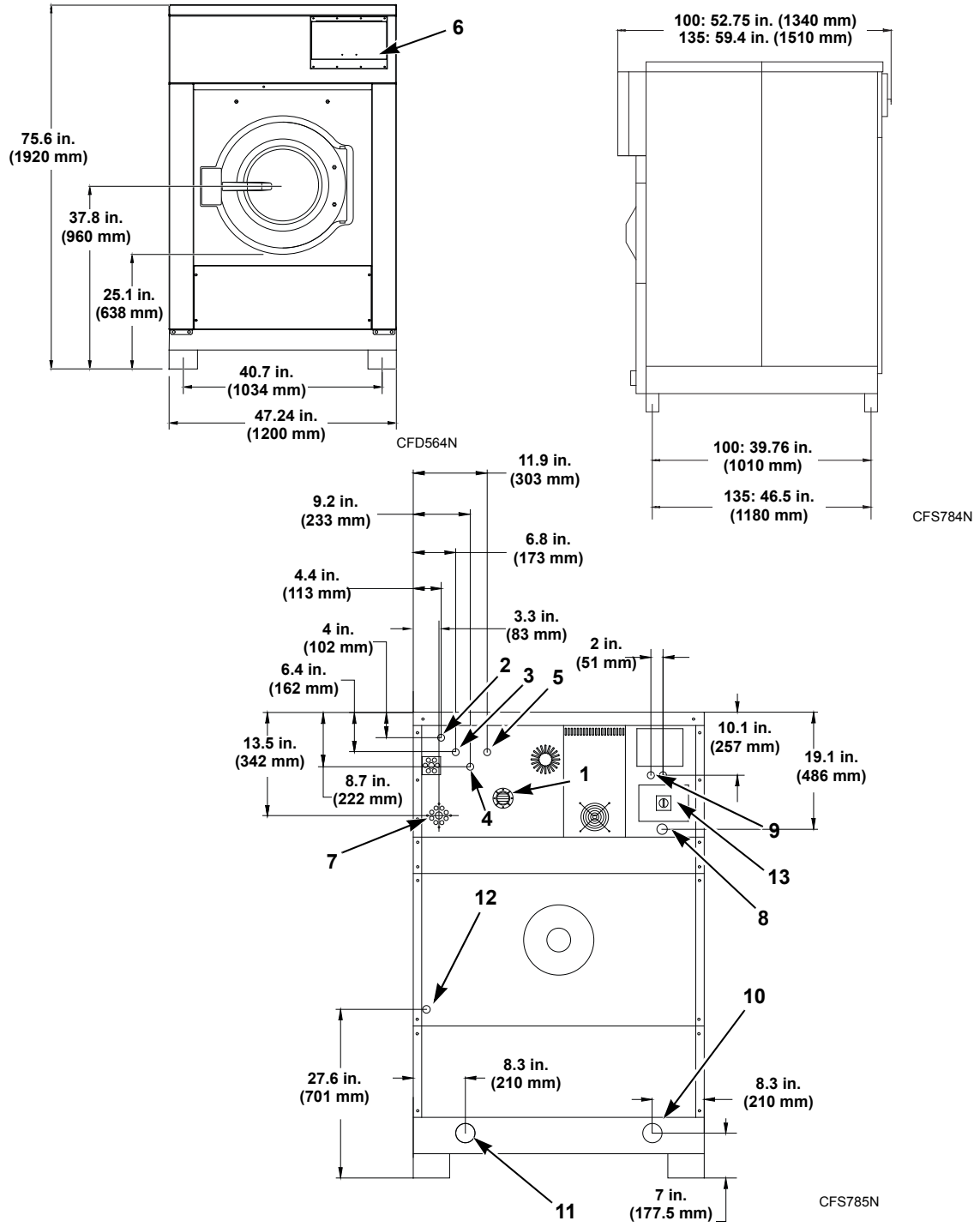

100 AND 135 POUND CAPACITY MODELS

1	Fill and Supply Ventilation	**8**	Electrical Power Input
2	Cold Water Inlet (Required)	**9**	External Supply Signal Input
3	Hot Water Inlet (Required)	**10**	Drain Outlet
4	Cold Water Inlet (Required)	**11**	Reuse Drain Outlet (Optional)
5	Cold Water Inlet (Required)	**12**	Steam Connection Input (Optional)
6	Flushing Supply Dispenser	**13**	Service Power Disconnect
7	External Liquid Supply Inlets		

Figure 9

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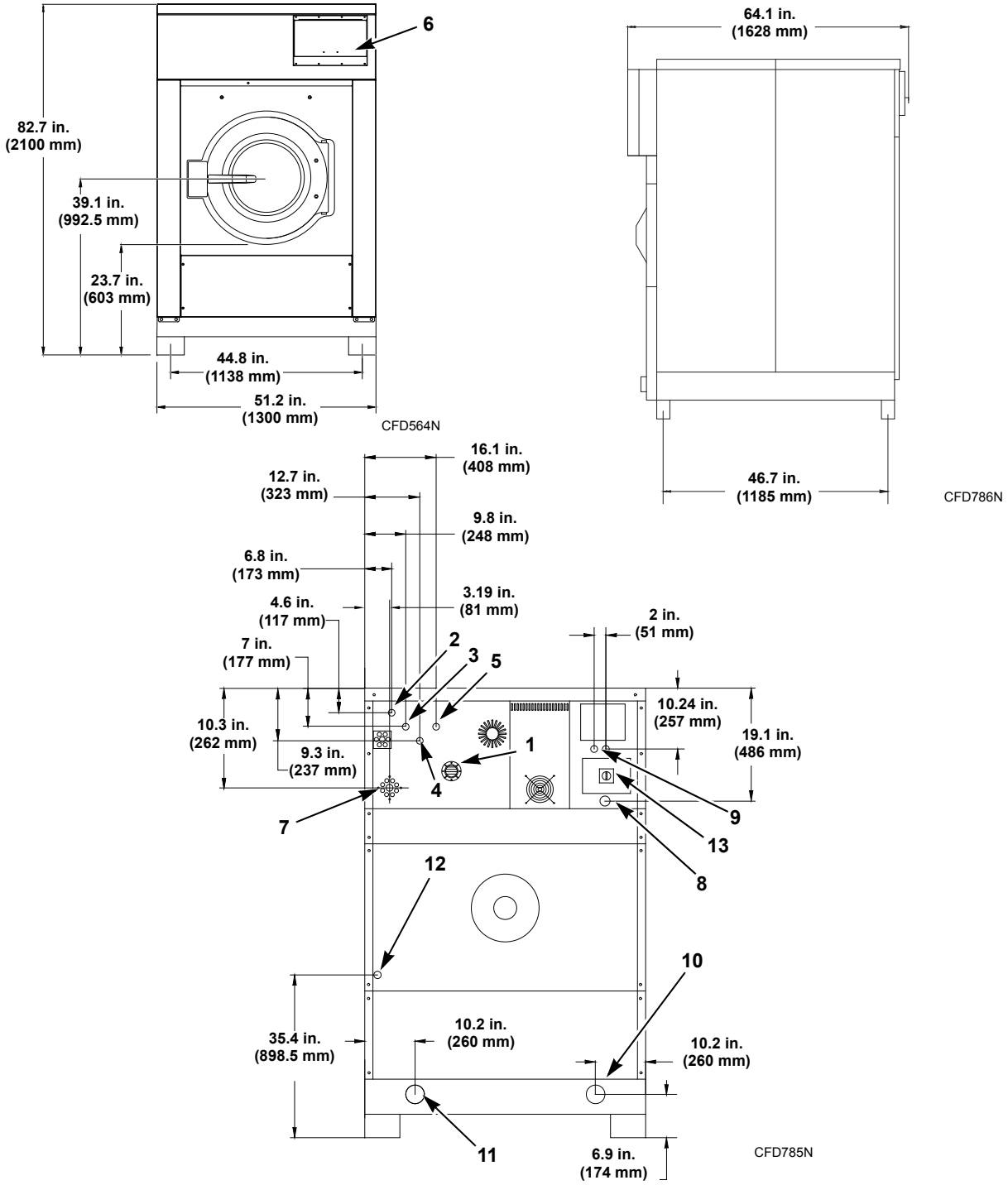

165 POUND CAPACITY MODELS

1	Fill and Supply Ventilation	**8**	Electrical Power Input
2	Cold Water Inlet (Required)	**9**	External Supply Signal Input
3	Hot Water Inlet (Required)	**10**	Drain Outlet (Standard)
4	Cold Water Inlet (Required)	**11**	Dual Drain Outlet (Optional)
5	Cold Water Inlet (Required)	**12**	Steam Connection Input (Optional)
6	Flushing Supply Dispenser	**13**	Service Power Disconnect
7	External Liquid Supply Inlets		

Figure 10

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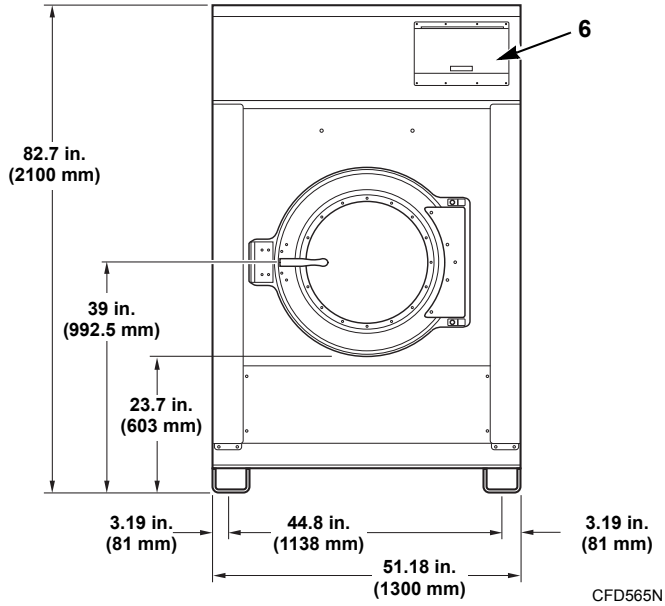

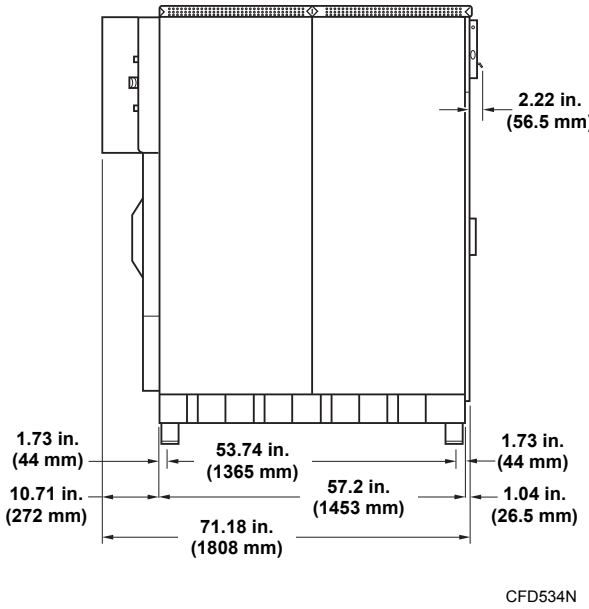

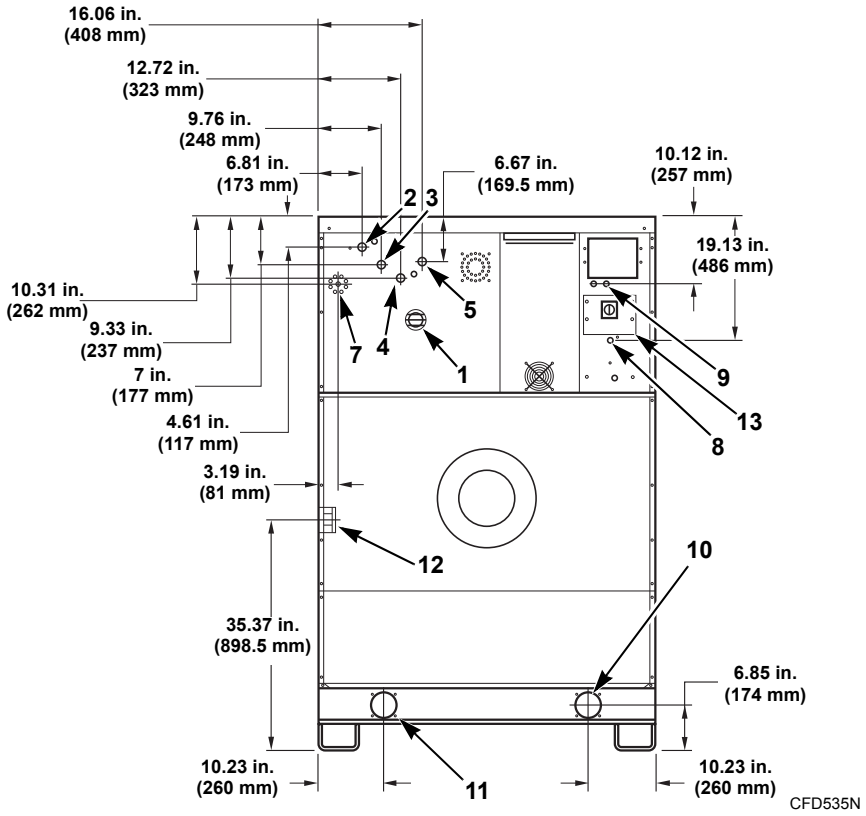

200 POUND CAPACITY MODELS

1	Fill and Supply Ventilation	**8**	Electrical Power Input
2	Cold Water Inlet (Required)	**9**	External Supply Signal Input
3	Hot Water Inlet (Required)	**10**	Drain Outlet (Standard)
4	Cold Water Inlet (Required)	**11**	Dual Drain Outlet (Optional)
5	Cold Water Inlet (Required)	**12**	Steam Connection Input (Optional)
6	Flushing Supply Dispenser	**13**	Service Power Disconnect
7	External Liquid Supply Inlets		

Figure 11

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Installation

Dimensional Clearances

Table 1 shows recommended minimum clearances on all sides of the machine.

Recommended Minimum Clearances												
Model	**18**	**25**	**30**	**33**	**35**	**40**	**55**	**75**	**100**	**135**	**165**	**200**
Minimum rear clearance	23.6 in. (600 mm)	23.6 in. (600 mm)	23.6 in. (600 mm)	23.6 in. (600 mm)	23.6 in. (600 mm)	23.6 in. (600 mm)	23.6 in. (600 mm)	23.6 in. (600 mm)	23.6 in. (600 mm)	23.6 in. (600 mm)	23.6 in. (600 mm)	23.6 in. (600 mm)
Minimum clearance between machine and wall	6 in. (150 mm)	6 in. (150 mm)	6 in. (150 mm)	6 in. (150 mm)	6 in. (150 mm)	6 in. (150 mm)	6 in. (150 mm)	6 in. (150 mm)	6 in. (150 mm)	6 in. (150 mm)	6 in. (150 mm)	6 in. (150 mm)
Minimum clearance between machines (side)	1.2 in. (30 mm)	1.2 in. (30 mm)	1 in. (25.4 mm)	1.2 in. (30 mm)	1.2 in. (30 mm)	1.2 in. (30 mm)	1.2 in. (30 mm)	1.2 in. (30 mm)	1.2 in. (30 mm)	1.2 in. (30 mm)	1.2 in. (30 mm)	1.2 in. (30 mm)
Minimum front clearance (door swing)	16.5 in. (419 mm)	16.5 in. (419 mm)	16.5 in. (419 mm)	21 in. (533 mm)	16.5 in. (419 mm)	21 in. (533 mm)	21 in. (533 mm)	21 in. (533 mm)	26 in. (660 mm)	26 in. (660 mm)	26 in. (660 mm)	26 in. (660 mm)

Table 1

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Machine Foundation

Thoroughness of detail must be stressed with all foundation work to ensure a stable unit installation, eliminating possibilities of excessive vibration during extract.

CAUTION

Ensure that the machine is installed on a level floor of sufficient strength and that the recommended clearances for inspection and maintenance are provided. Never allow the inspection and maintenance space to be blocked.

W488

The machine must be placed on a smooth level surface so that the entire base of the machine is supported and rests on the mounting surface.

The standard installation does not require anchoring unless mandated by state or local codes.

Static and dynamic loads on the floor or foundation are shown in *Table 2*.

Table 2 can be used as a reference when designing floors and foundations.

If installing a foundation and pad, prepare a form for the above-ground portion of the foundation. Verify that the top of the foundation is level. The height of the foundation and pad must not exceed 8 inches (203 mm) above the existing floor.

IMPORTANT: Mounting bolts MUST be used for installation on the 18, 25 and 35 pound models equipped with steam heat and models installed on metal base frames. Refer to Mounting Bolt Installation.

Floor Load Data												
Model	**18**	**25**	**30**	**33**	**35**	**40**	**55**	**75**	**100**	**135**	**165**	**200**
Kinetic Energy of the Cylinder, (N/m)	1386	1730	2592	2736	3240	4105	6640	12404	18361	23257	29581	29581
Dynamic Bottom Load, (N/Hz)	550/16	538/16	1100/16	1010/16	1450/16	1090/16	2300/15	2340/15	2960/13	3900/13	4960/13	6100/13

Table 2

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Mechanical Installation

Frame Dimensions and Mounting Bolt Location

IMPORTANT: Drawings are not to scale.

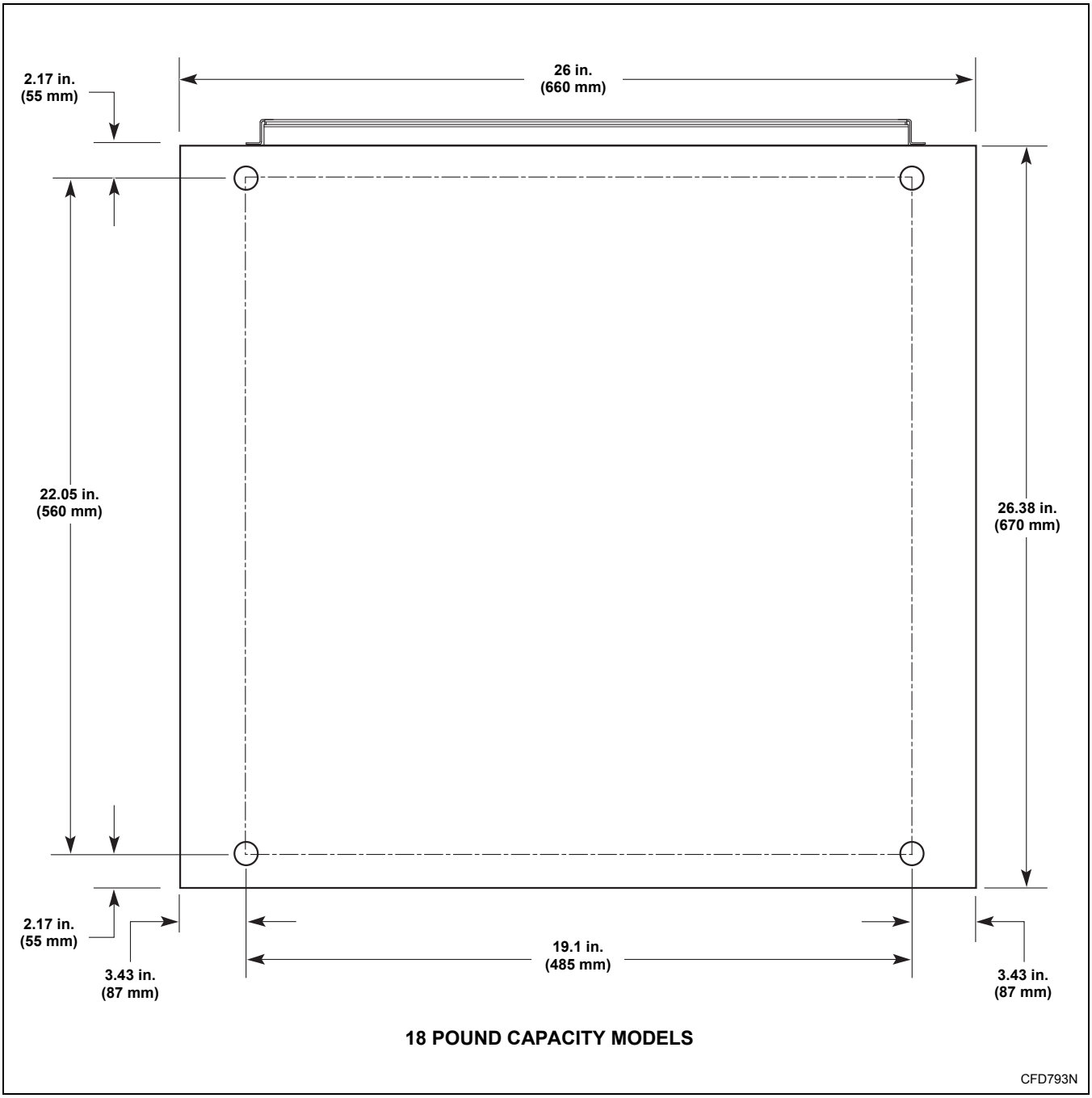

Figure 12

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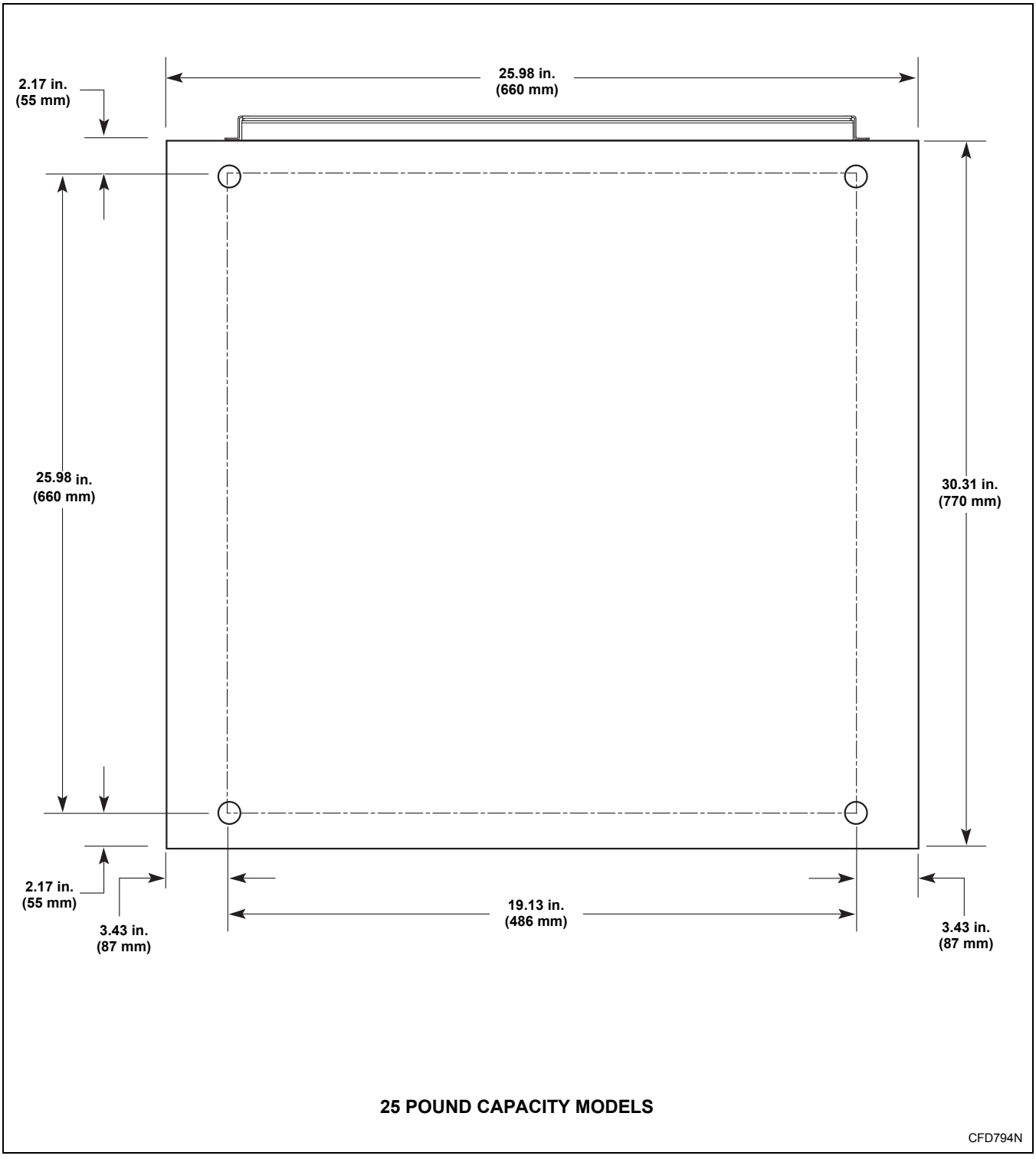

Figure 13

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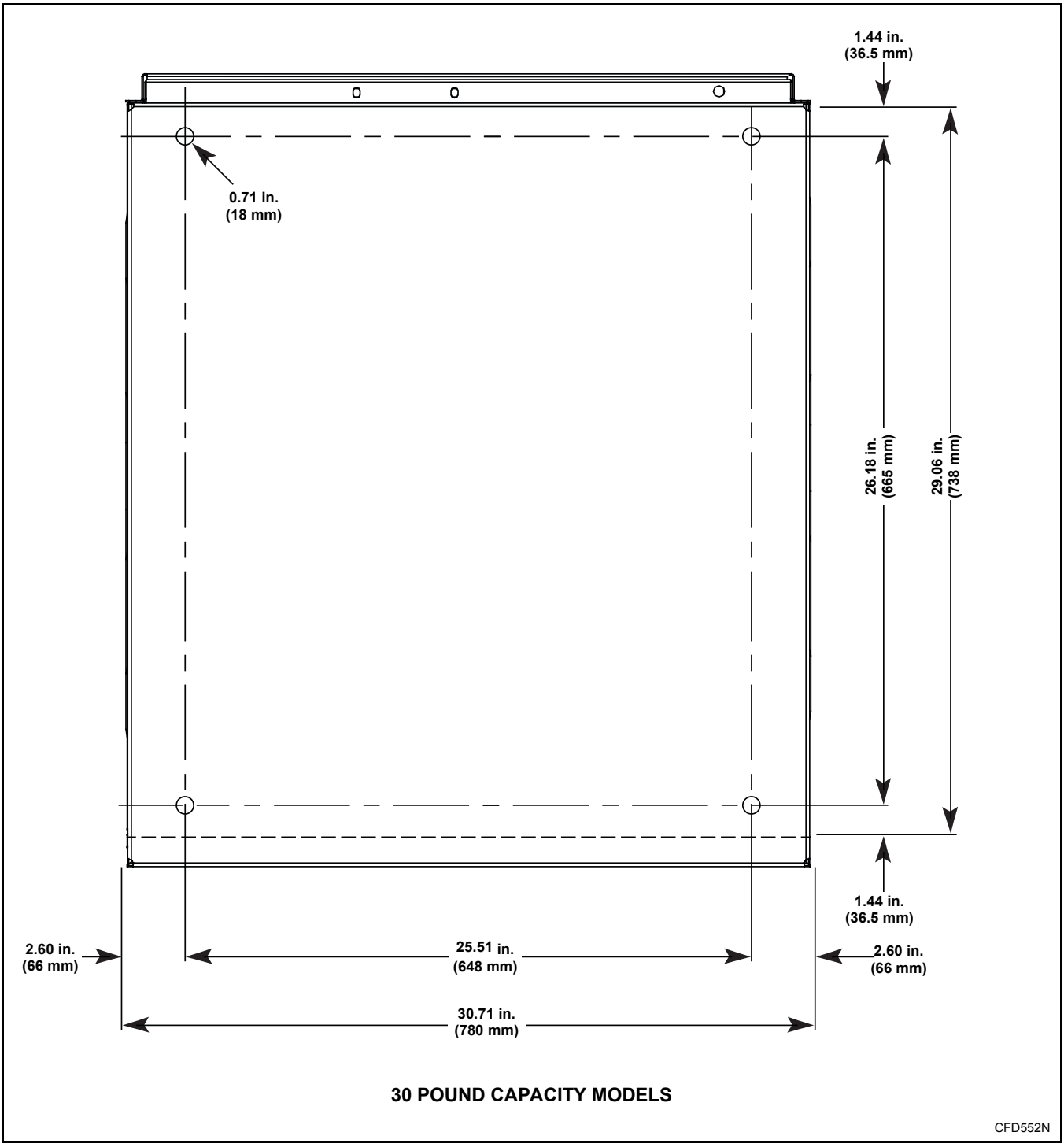

Figure 14

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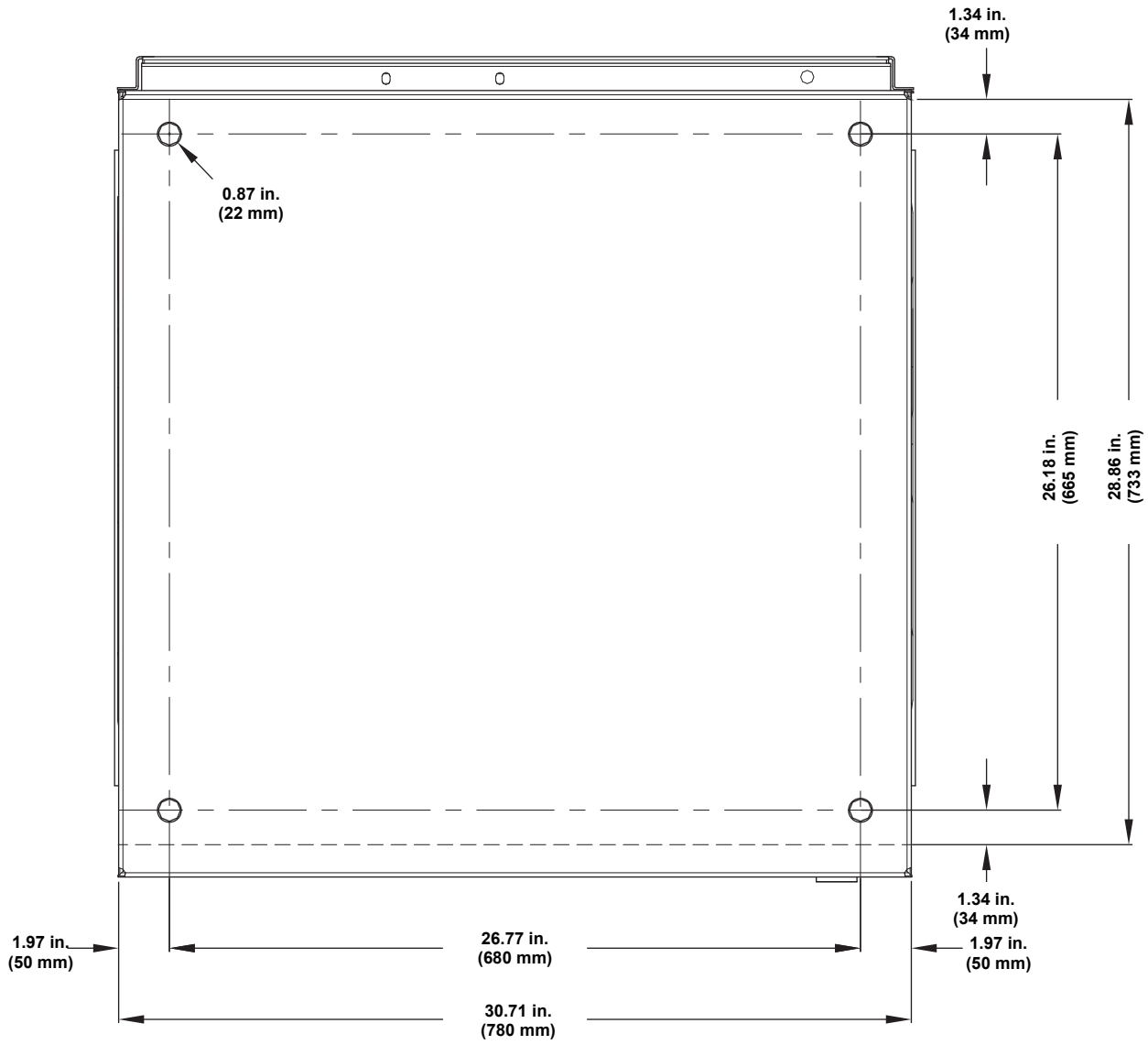

Figure 15

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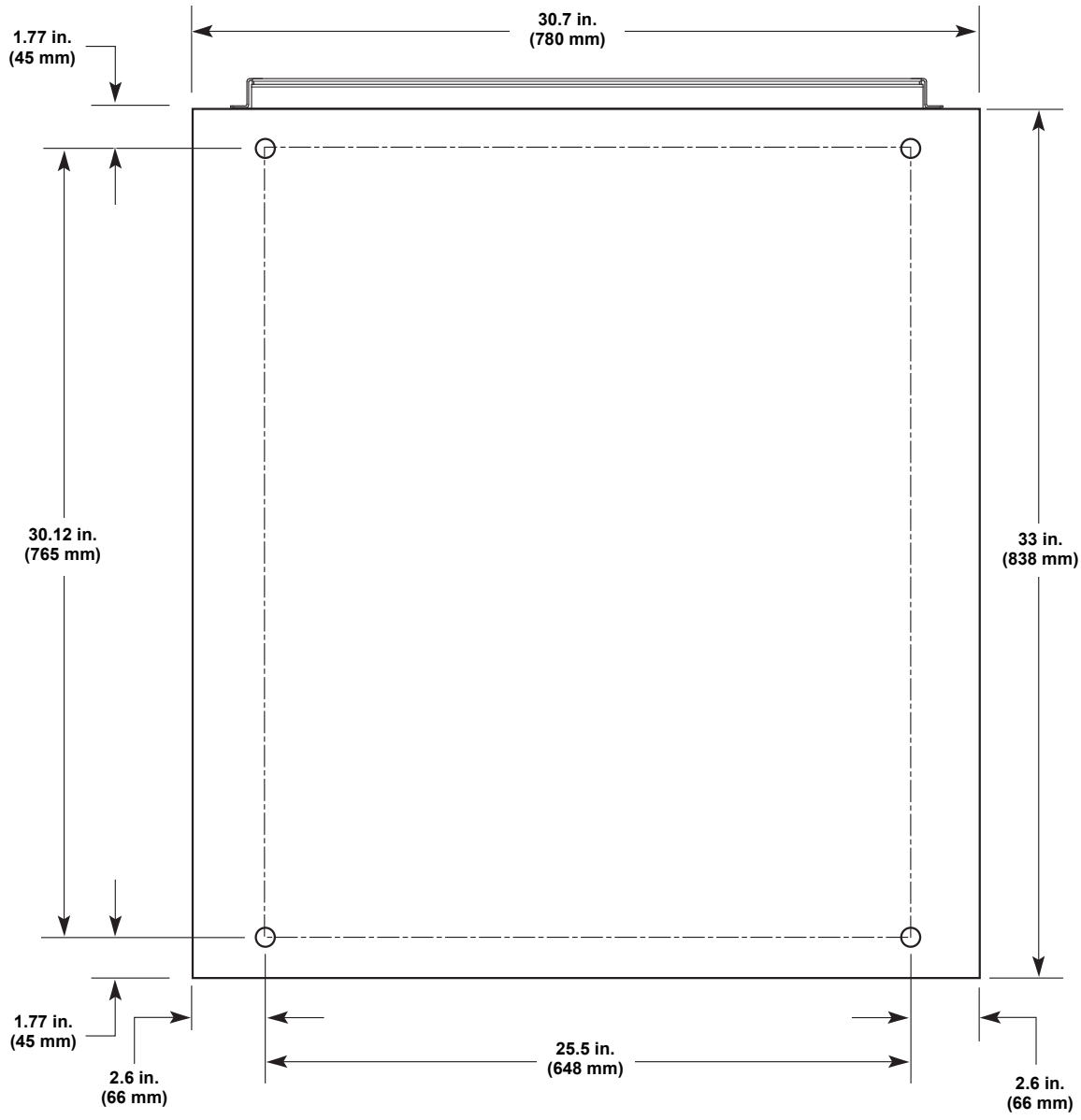

Figure 16

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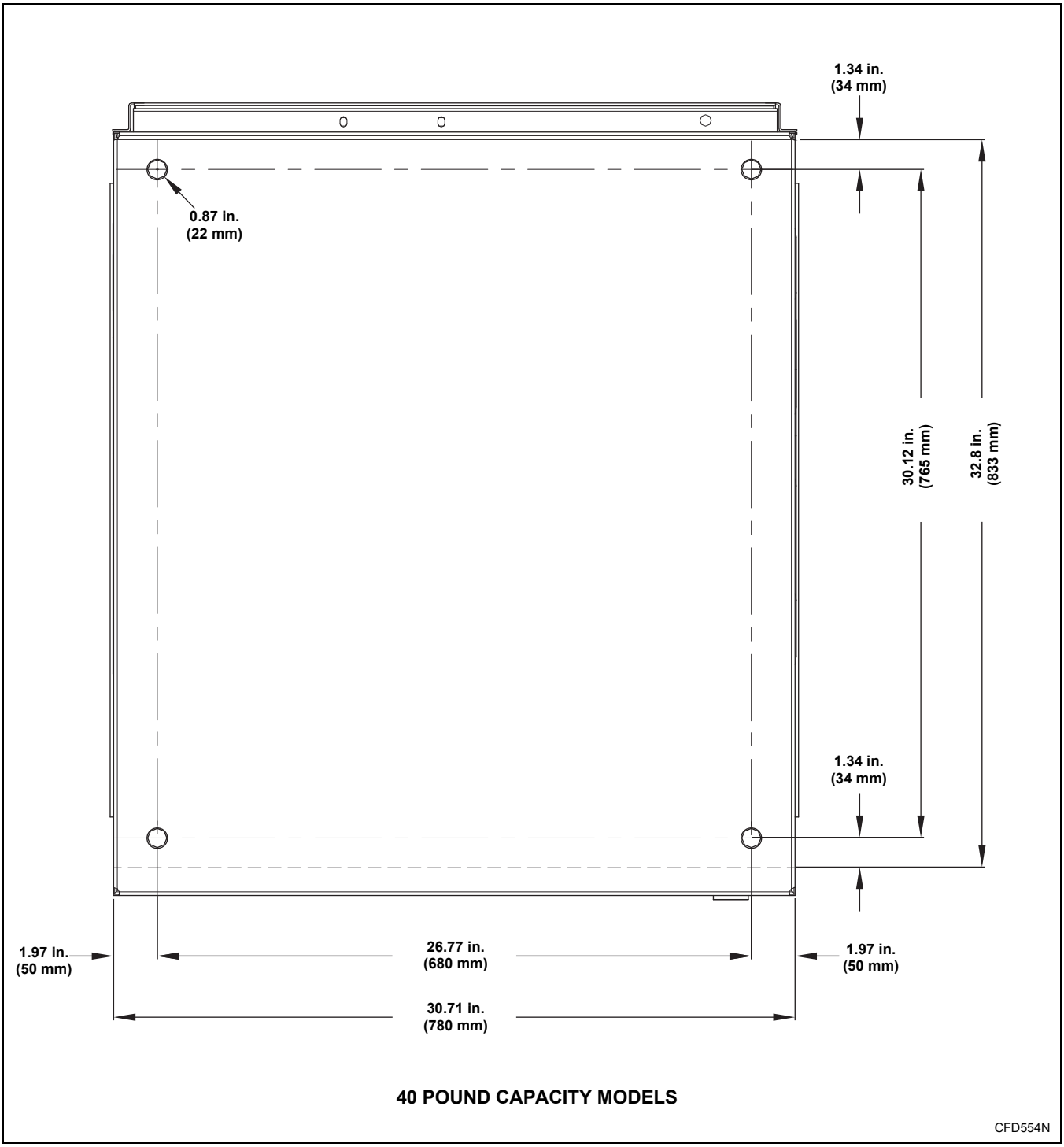

Figure 17

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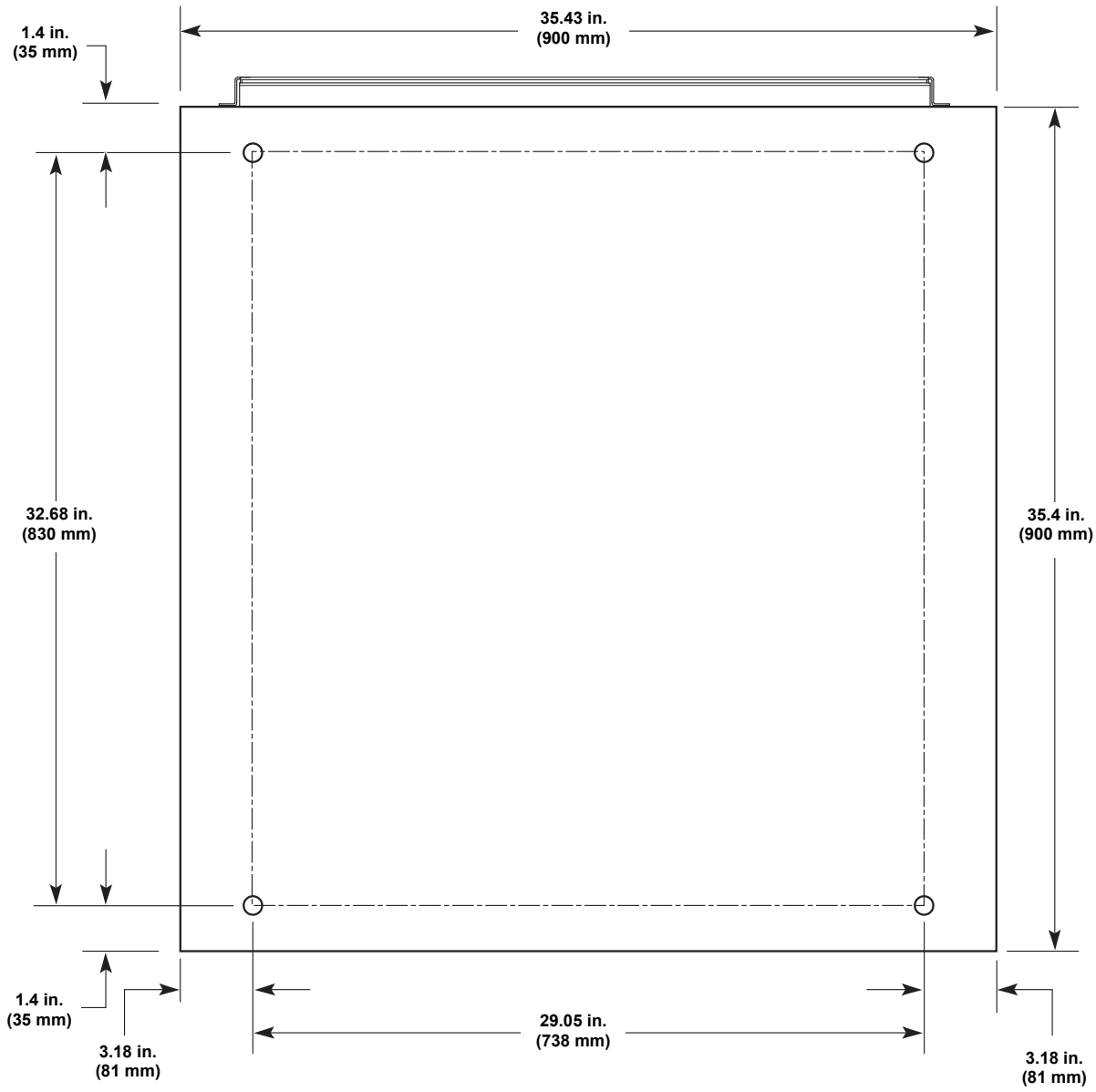

Figure 18

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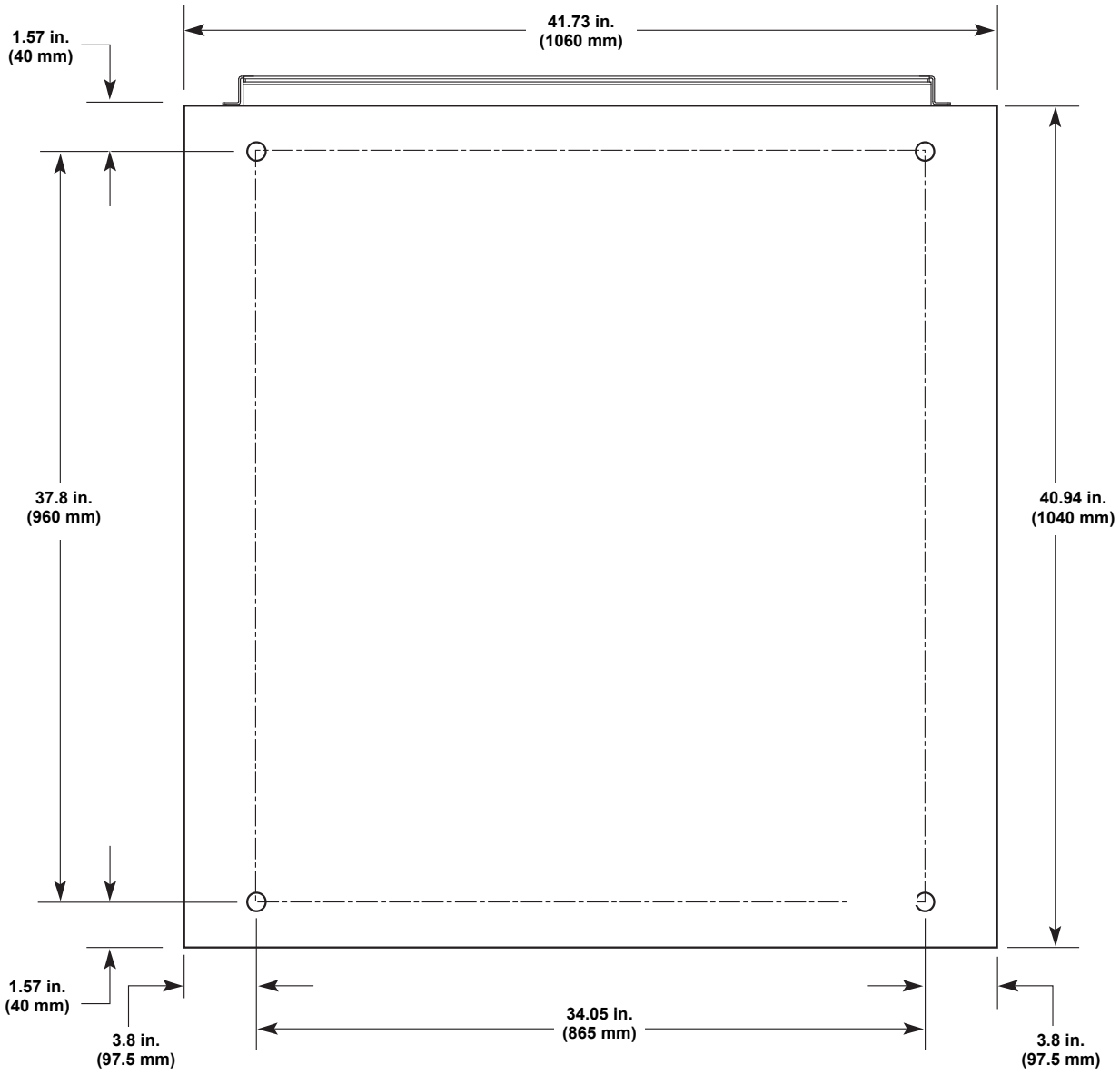

Figure 19

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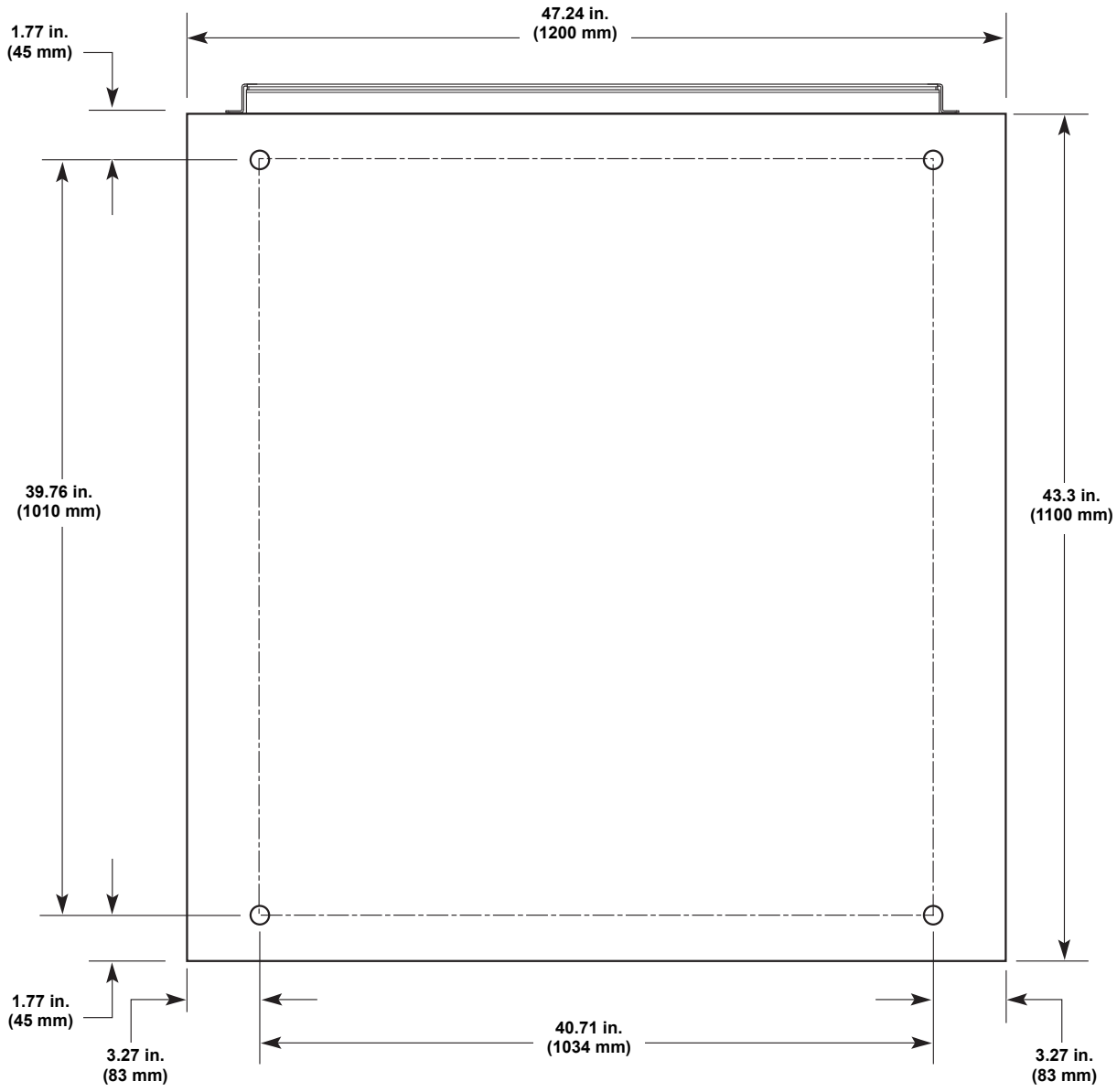

Figure 20

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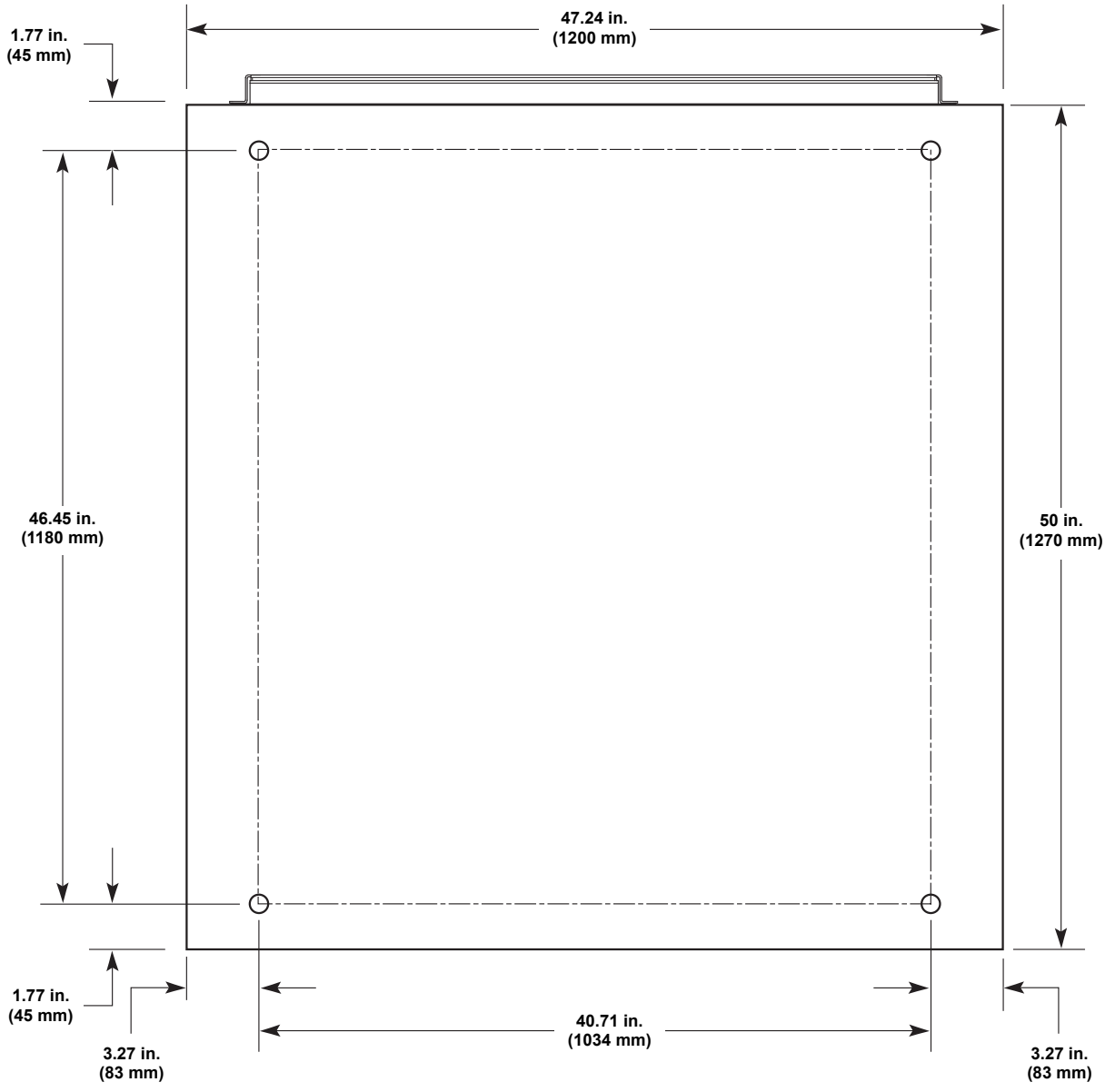

Figure 21

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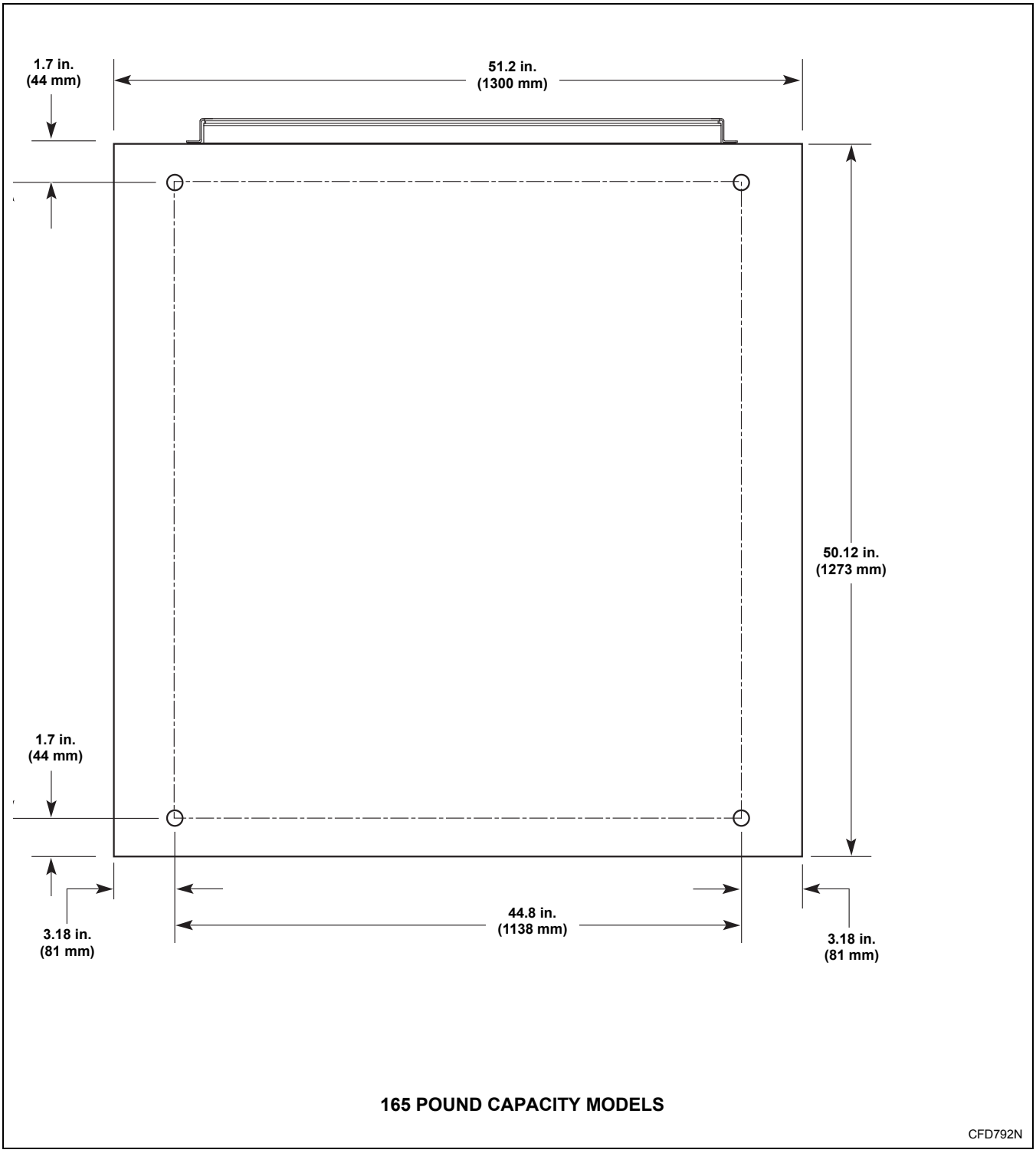

Figure 22

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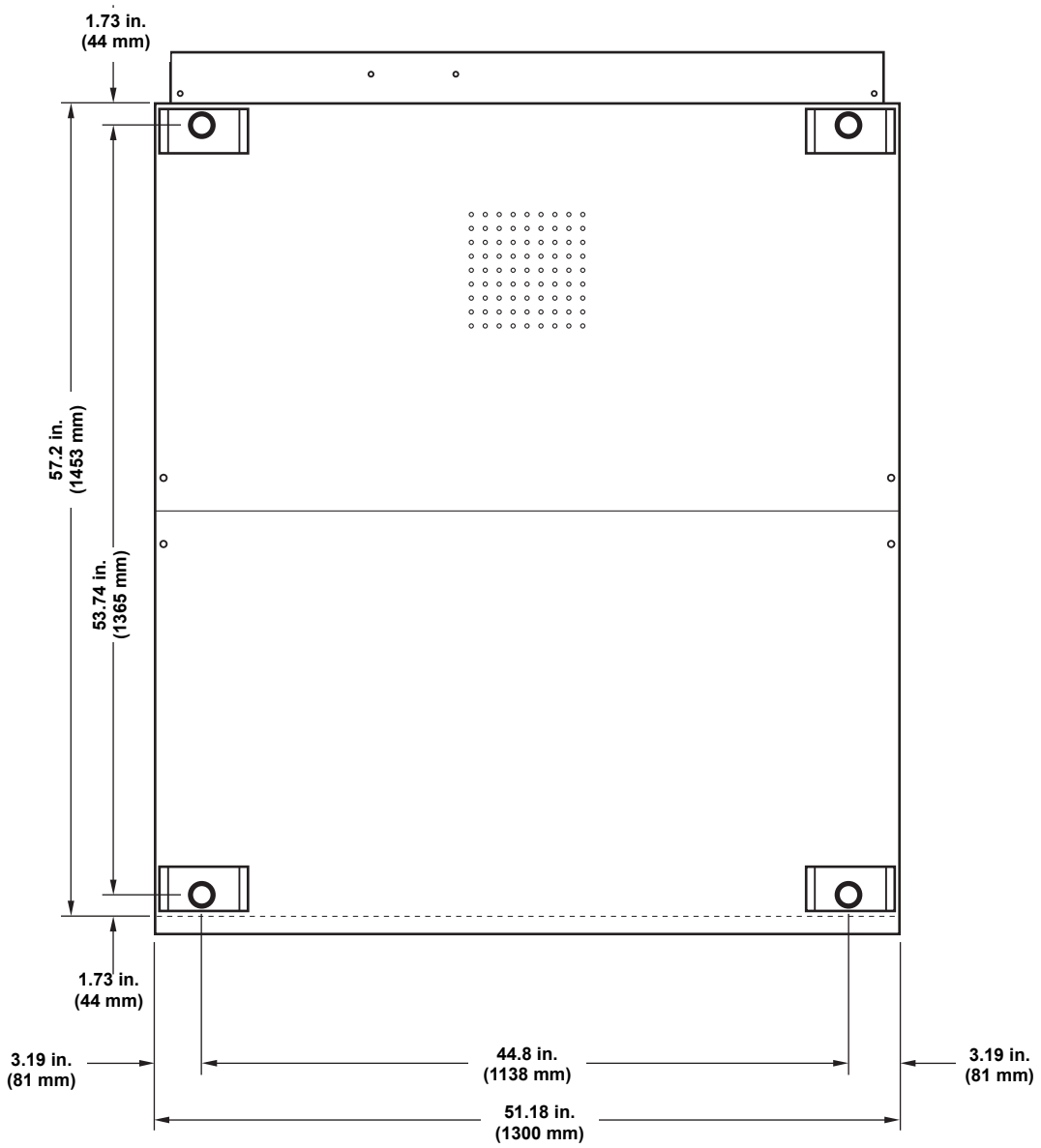

Figure 23

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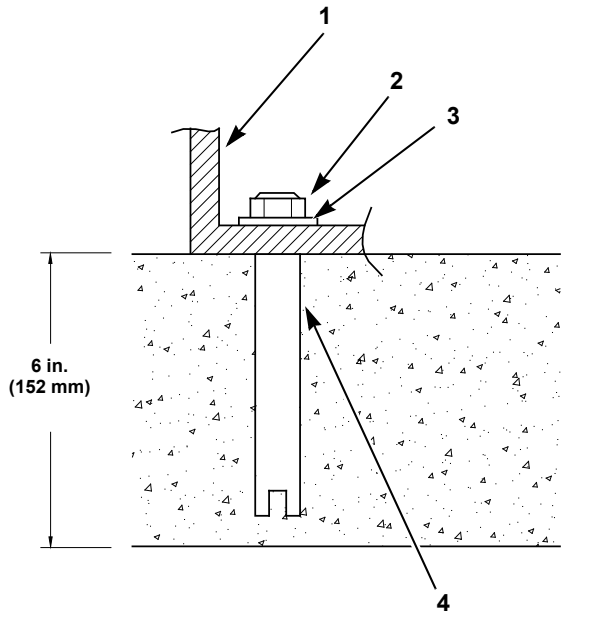
Mounting Bolt Installation (If Required)



1	Base Frame
2	Bolt
3	Washer
4	Anchor Bolt/Plug

Figure 24

After the concrete has cured and the anchors are installed, proceed as follows:

1. Place the machine adjacent to the foundation. Do not attempt to move it by pushing on the sides. Always insert a pry bar or other device under the bottom of the frame of the washer-extractor to move it.
2. Place the machine carefully over the anchors.
3. Put bolts through the machine in the anchors and fasten them. For the 18, 25, 30, and 35 models, the diameter of the bolt must be minimum 1/2-13 or 12 mm; for the 33, 40, 55, 75, 100, 135, 165 and 200 models, the diameter of the bolt must be minimum 5/8-11 or 16 mm.
4. To level machine, fill the spaces between the machine base and floor with machinery grout. Grout completely under all frame members. Remove front and rear panels to gain access to all frame members. Force grout under the machine base until all voids are filled.
5. Allow machine grout to set, but not cure.
6. Remove the spacers carefully, allowing the machine to settle into the wet grout.
7. Position washers and locknuts on machinery anchor bolts and finger-tighten to machine base.
8. After the grout is completely cured, tighten the locknuts by even increments – one after the other – until all are tightened evenly and the machine is fastened securely to the floor.
9. Remove the four red transport brackets which secure the moving components of the machine during shipping. Refer to *Figures 25*, *27* and *28* for typical transport bracket locations.

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Removing the Transport Brackets

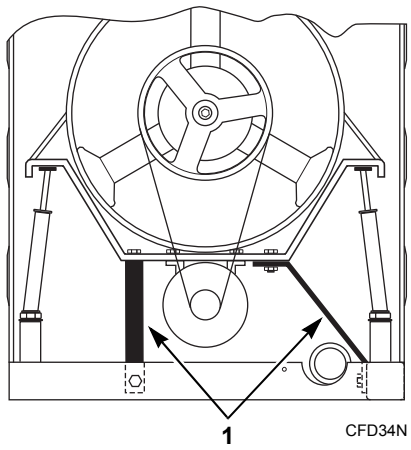
To prevent damage during transportation, the machine has been equipped with four red transport brackets (refer to *Figure 25* for 18, 25 and 35 pound models; refer to *Figure 26* for 33 and 40 pound models; refer to *Figure 27* for 55 and 75 pound models [depending on model number]; refer to *Figure 28* for 100, 135, 165 and 200 pound models) to eliminate every possible movement of the tub.

After the machine has been placed level, take off the service panels and the back panel to remove these transport brackets.

WARNING

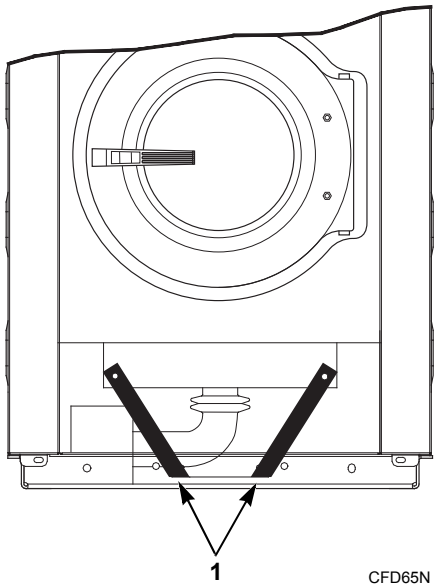
The machine must never be activated before removing these transport brackets.

W489



18, 25, 30 AND 35 MODELS WITH A OR M IN THE 8TH POSITION (E. G. *X18PVXM6) OR 9TH POSITION (E. G. *X018PVXM7) OF THE MODEL NUMBER

1 Panel Braces



18, 25 AND 35 MODELS WITH U IN THE 8TH POSITION (E. G. *X18PVXU6) OR 9TH POSITION (E. G. *X018PVXU7) OF THE MODEL NUMBER

1 Transport Brackets

Figure 25

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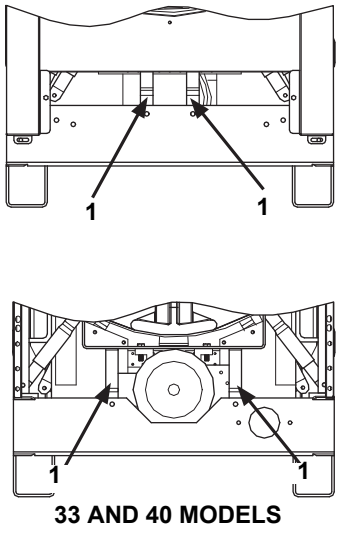
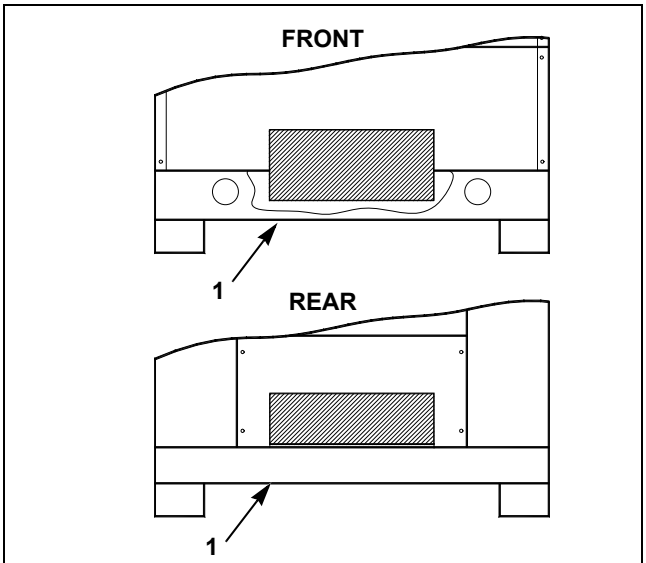


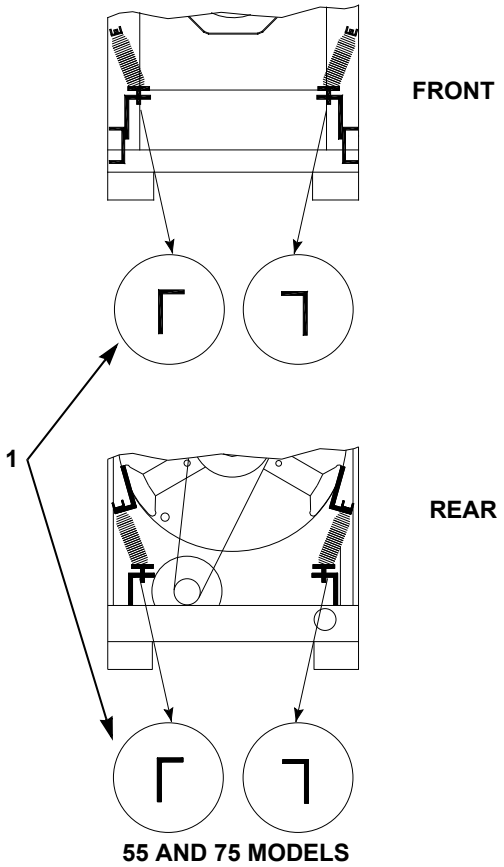
1 Transport Brackets

Figure 26



1 Transport Brackets

Figure 28



1 Transport Brackets

Figure 27

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Removing the Transport Block

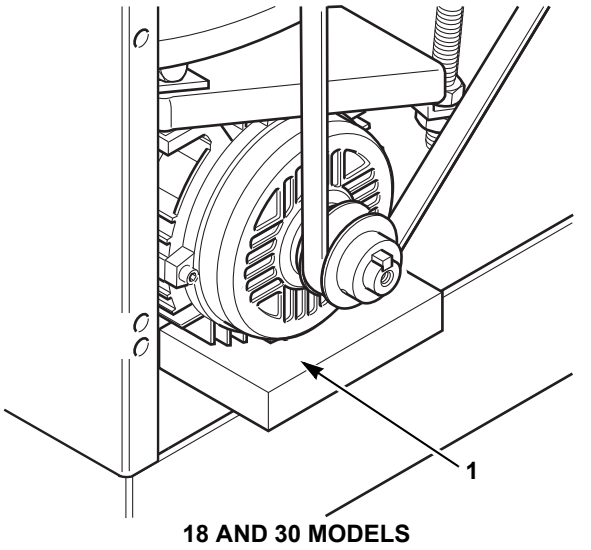
WARNING

The machine must never be activated before removing the transport block.

W618

To prevent damage during transportation, machine has been equipped with a transport block. To remove, proceed as follows:

1. After machine has been placed on level ground, remove service panels and back panel.
2. For 18 and 30 pound models, at rear of machine, lift at bottom of motor and remove transport block if present. Refer to *Figure 29*.

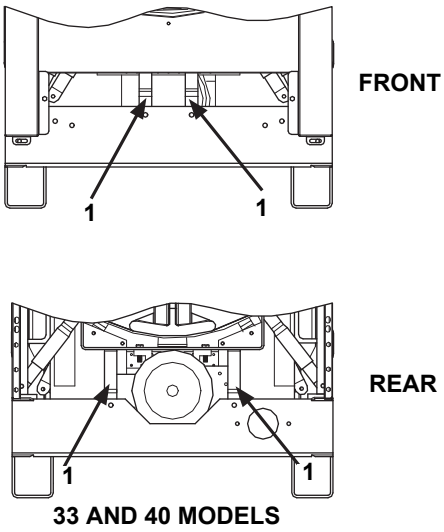


1 Transport Block (Remove)

Figure 29

IMPORTANT: Do NOT lift motor by the pulley.

3. For 18 and 30 pound models, remove the panel braces. Refer to *Figure 25*.
4. For 33 and 40 pound models, remove the transport brackets. Refer to *Figure 26*.



1 Transport Brackets

Figure 30

5. Replace all panels removed.

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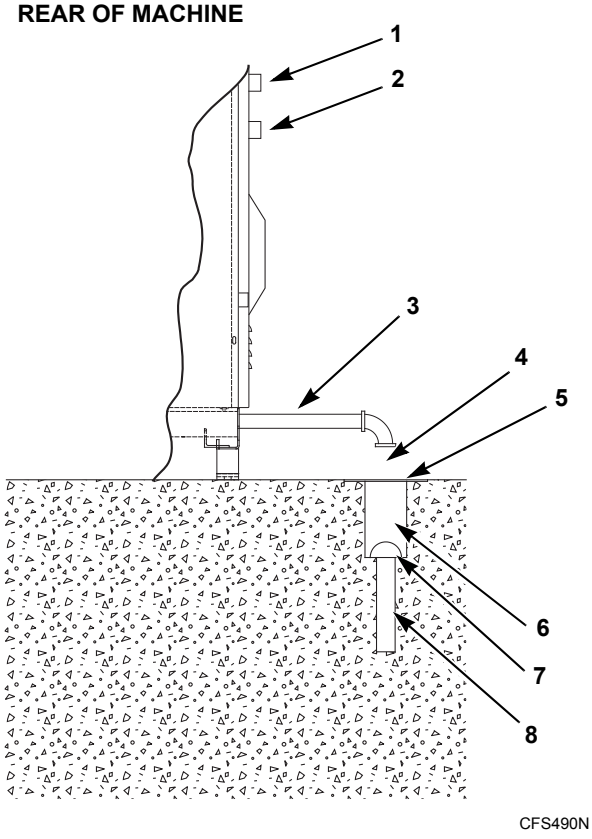
Drain Connection

A drain system of adequate capacity is essential to machine performance.

The water should empty through a vented pipe directly into a sump or floor drain.

Figure 31 shows drain line and drain trough configurations.



1	Water Inlet
2	Water Inlet Air Gap
3	Drain Pipe
4	1-Inch Minimum Waste Line Air Gap Per local code (if required)
5	Steel Grate
6	Drain Trough (if required)
7	Strainer (if required)
8	Waste Line

Figure 31

A flexible connection must be made to a vented or air gap drain system to prevent an air lock and siphoning.

If proper drain size is not available or practical, a surge tank is required. A surge tank along with with a sump pump should be used when gravity drainage is not possible.

IMPORTANT: Machine must be installed in accordance with all local codes and ordinances.

Before any deviation from specified installation procedures is attempted, the customer or installer should contact the distributor.

Increasing the drain hose length, installing elbows, or causing bends will impair machine performance.

Refer to *Table 3* for capacity-specific drain information.

NOTE: Installation of additional machines will require proportionately larger drain connections. Refer to *Table 4*.

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Drain Information												
Model	**18**	**25**	**30**	**33**	**35**	**40**	**55**	**75**	**100**	**135**	**165**	**200**
Drain connection size, ID	1.97 in. (50 mm)	1.97 in. (50 mm)	1.97in. (50 mm)	1.97 in. (50 mm)	1.97 in. (50 mm)	1.97 in. (50 mm)	2.95 in. (75 mm)	2.95 in. (75 mm)	2.95 in. (75 mm)	2.95 in. (75 mm)	2.95 in. (75 mm)	2.95 in. (75 mm)
Number of drain outlets	1	1	1	1	1	1	1	1	1	1	2	2
Drain flow capacity	21.13 gal/min (80 l/ min)	21.13 gal/min (80 l/ min)	20 gal/min (76 l/ min)	21.13 gal/min (80 l/ min)	31.7 gal/min (120 l/ min)	21.13 gal/min (80 l/ min)	74 gal/min (280 l/ min)	74 gal/min (280 l/ min)	74 gal/min (280 l/ min)	74 gal/min (280 l/ min)	74 gal/min (280 l/ min)	74 gal/min (280 l/ min)
Recom-mended drain pit size	2.5 ft^3 (72 l)	3.3 ft^3 (95 l)	2.5 ft^3 (70.3 1)	5.1 ft^3 (145 1)	5.8 ft^3 (165 l)	6.4 ft^3 (181 1)	8.3 ft^3 (235 l)	10.7 ft^3 (304 l)	16 ft^3 (455 l)	20.3 ft^3 (575 l)	24 ft^3 (679 l)	31.8 ft^3 (900 1)

Table 3

-

Drain Line Sizing Minimum Drain ID							
Model	**Number of Machines**						
	1	**2**	**3**	**4**	**5**	**6**	**7**
18	2 in. (51 mm)	3 in. (76.2 mm)	3.5 in. (88 mm)	4 in. (102 mm)	4.5 in. (114 mm)	4.88 in. (124 mm)	5.5 in. (140 mm)
25	2 in. (51 mm)	3 in. (76.2 mm)	3.5 in. (88 mm)	4 in. (102 mm)	4.5 in. (114 mm)	4.88 in. (124 mm)	5.5 in. (140 mm)
30	2 in. (51 mm)	3 in. (76.2 mm)	3.5 in. (88 mm)	4 in. (102 mm)	4.5 in. (114 mm)	4.88 in. (124 mm)	5.5 in. (140 mm)
33	2 in. (51 mm)	3 in. (76.2 mm)	3.5 in. (88 mm)	4 in. (102 mm)	4.5 in. (114 mm)	4.88 in. (124 mm)	5.5 in. (140 mm)
35	2 in. (51 mm)	3 in. (76.2 mm)	3.5 in. (88 mm)	4 in. (102 mm)	4.5 in. (114 mm)	4.88 in. (124 mm)	5.5 in. (140 mm)
40	2 in. (51 mm)	3 in. (76.2 mm)	3.5 in. (88 mm)	4 in. (102 mm)	4.5 in. (114 mm)	4.88 in. (124 mm)	5.5 in. (140 mm)
55	3 in. (76.2 mm)	4 in. (102 mm)	5.15 in. (131 mm)	6 in. (152 mm)	6.7 in. (170 mm)	7.3 in. (186 mm)	8 in. (203 mm)
75	3 in. (76.2 mm)	4 in. (102 mm)	5.15 in. (131 mm)	6 in. (152 mm)	6.7 in. (170 mm)	7.3 in. (186 mm)	8 in. (203 mm)
100	3 in. (76.2 mm)	4 in. (102 mm)	6 in. (152 mm)	7 in. (177.8 mm)	8 in. (203 mm)	10 in. (254 mm)	12 in. (305 mm)
135	3 in. (76.2 mm)	4 in. (102 mm)	6 in. (152 mm)	7 in. (177.8 mm)	8 in. (203 mm)	8 in. (203 mm)	12 in. (305 mm)
165	3 in. (76.2 mm)	4 in. (102 mm)	6 in. (152 mm)	7 in. (177.8 mm)	8 in. (203 mm)	8 in. (203 mm)	12 in. (305 mm)
200	3 in. (76.2 mm)	4 in. (102 mm)	6 in. (152 mm)	7 in. (177.8 mm)	8 in. (203 mm)	8 in. (203 mm)	12 in. (305 mm)

Table 4

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Water Connection

WARNING

To prevent personal injury, avoid contact with inlet water temperatures higher than 125° Fahrenheit (51° Celsius) and hot surfaces.

W748

The 18-135 pound models are delivered with three hoses with 3/4 inch hose connectors. The 165 and 200 pound models are delivered with 3 x 1 inch and 1 x 3/4 inch hose connectors. These hoses fit the water inlet valves of the machine and the main water inlet taps.

In case of boiler fed machines, a maximum temperature of hot water of 194°F (90°C) should be available.

Connections should be supplied by a hot and a cold water line per national and local codes.

To connect water service to machine with rubber hoses, use the following procedure:

1. Before installing hoses, flush the water system for at least two minutes.
2. Check filters in the machine's inlet hoses for proper fit and cleanliness before connecting.
3. Hang the hoses in a large loop, do not allow them to kink.

If additional hose length is needed, flexible hoses with screen filters are required. Each hose should have a screen filter installed to keep rust and other foreign particles out of the water inlet valves.

Pressure of 30-85 psi (2-5.7 bar) provides best performance. Although the machine will function at lower pressures, increased fill times will occur with some loss of supply flushing.

Suitable air cushions (risers) should be installed in supply lines to prevent "hammering."

Water Supply Information												
Model	**18**	**25**	**30**	**33**	**35**	**40**	**55**	**75**	**100**	**135**	**165**	**200**
Water inlet connection size	0.75 in. (19 mm)	0.75 in. (19 mm)	0.75 in. (19 mm)	0.75 in. (19 mm)	0.75 in. (19 mm)	0.75 in. (19 mm)	0.75 in. (19 mm)	0.75 in. (19 mm)	0.75 in. (19 mm)	0.75 in. (19 mm)	0.75 and 1.0 in. (19 and 25 mm)	0.75 and 1.0 in. (19 and 25 mm)
Number of water inlets (standard)	3	3	3	3	3	3	3	3	4	4	4	4
Recom-mended pressure	29-82.7 psi (2-5.7 bar)	29-82.7 psi (2-5.7 bar)	29-82.7 psi (2-5.86 bar)	29-82.7 psi (2-5.7 bar)	29-82.7 psi (2-5.7 bar)	29-82.7 psi (2-5.7 bar)	29-82.7 psi (2-5.7 bar)	29-82.7 psi (2-5.7 bar)	29-82.7 psi (2-5.7 bar)	29-82.7 psi (2-5.7 bar)	29-82.7 psi (2-5.7 bar)	29-82.7 psi (2-5.7 bar)
Inlet flow capacity	5.3 gal/ min (20 l/ min)	5.3 gal/ min (20 l/ min)	5.3 gal/ min (20 l/ min)	5.3 gal/ min (20 l/ min)	5.3 gal/ min (20 l/ min)	5.3 gal/ min (20 l/ min)	12 gal/ min (45 l/ min)	12 gal/ min (45 l/ min)	12 gal/ min (45 l/ min)	12 gal/ min (45 l/ min)	25 gal/ min (95 l/ min)	25 gal/ min (95 l/ min)

Table 5

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Electrical Installation

IMPORTANT: Electrical ratings are subject to change. Refer to serial decal for electrical ratings information specific to your machine.

IMPORTANT: Alliance Laundry Systems warranty does not cover compounds that fail as a result of improper input voltage.

WARNING

Before starting wiring or inspection, power must be switched OFF. Check to make sure that the operation panel indicator is OFF. Any person who is involved in wiring or inspection shall wait for at least 10 minutes after the power supply has been switched OFF and check that there are no residual voltage using a tester or the like. The capacitor of the inverter or the EMC filter is charged with high voltage for some time after power is OFF and it is dangerous.

W795

WARNING

Hazardous Voltage. Can cause shock, burn or death. Verify that a ground wire from a proven earth ground is connected to the lug near the input power block on this machine.

W360

The AC inverter drive requires a clean power supply free from voltage spikes and surges. A voltage monitor should be used to check incoming power. The customer's local power company may provide such a monitor.

If input voltage measures above 240V for a 220V drive or above 415V for a 400V drive, ask the power company to lower the voltage. As an alternative, a step-down transformer kit is available from the distributor.

The AC drive provides overload protection for the drive motor. However, a separate single or three phase circuit breaker must be installed for complete electrical overload protection. This prevents damage to the motor by disconnecting all legs if one should be lost accidentally. Check the data plate on the back of the machine or consult *Table 6* for circuit breaker requirements.

IMPORTANT: Do NOT use fuses in place of a circuit breaker.

DANGER

Do not use a phase adder on any variable-speed machine.

W490

The machine should be connected to an individual branch circuit not shared with lighting or other equipment.

The connection should be shielded in a liquid tight or approved flexible conduit with proper conductors of correct size installed in accordance with the National Electric Code or other applicable codes. The connection must be made by a qualified electrician using the wiring diagram provided with the machine, or according to accepted European standards for CE-approved equipment.

Use wire sizes indicated in *Table 6* for runs up to 50 feet.

Use next larger size for runs of 50 to 100 feet. Use two sizes larger for runs greater than 100 feet.

For personal safety and proper operation, the machine must be grounded in accordance with state and local codes. If such codes are not available, grounding must conform with the National Electric Code, article 250 (current edition). The ground connection must be made to a proven earth ground, not to conduit or water pipes.

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Electrical Specifications											
Voltage Designation						Standard			Electric Heat		
Model	Code	Voltage	Cycle	Phase	Wire	Full Load Amps	Circuit Breaker US (Non-US)	AWG/mm^2	Full Load Amps (Heating Element kW)	Circuit Breaker US (Non-US)	AWG/mm^2
18	C	380-415	50/60	3	3+N+PE	10	15 (16)	14/2.5	9 - 4.2 kW (380 V)	15 (16)	14/2.5
									10.1 - 4.2 kW (415 V)		
									11.6 - 6 kW (380 V)	15 (16)	14/2.5
									13.4 - 6 kW (415 V)		
									16.2 - 9 kW (380 V)	25 (20)	14/2.5
									18.8 - 9 kW (415 V)		
									20.8 - 12 kW (380 V)	30 (25)	14/2.5
									24.3 - 12 kW (415 V)		
	N	440-480	50/60	3	3+PE	4.1	10 (6)	14/2.5	16.8 - 12 kW (440 V)	25 (20)	14/2.5
									19.8 - 12 kW (480 V)		
	P	380-415	50/60	3	3+N+PE	4.1	10 (6)	14/2.5	7.4 - 4.2 kW (380 V)	10 (10)	14/2.5
									8.6 - 4.2 kW (415 V)		
									10.1 - 6 kW (380 V)	15 (16)	14/2.5
									11.9 - 6 kW (415 V)		
									14.7 - 9 kW (380 V)	25 (20)	14/2.5
									17.3 - 9 kW (415 V)		
									19.3 - 12 kW (380 V)	30 (25)	14/2.5
									22.8 - 12 kW (415 V)		
	Q	200-240	50/60	3	3+PE	Not Available			11.1 - 4.2 kW (208 V)	15 (16)	14/2.5
									14 - 4.2 kW (240 V)		
									14.8 - 6 kW (208 V)	25 (20)	14/2.5
									18.9 - 6 kW (240 V)		
									21 - 9 kW (208 V)	30 (25)	14/2.5
									27.1 - 9 kW (240 V)		
	X	200-240	50/60	1/3	2/3+PE	10	15 (16)	14/2.5	Not Available		

Table 6 (Continued)

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Table 6 (Continued)

Voltage Designation						Standard			Electric Heat		
Model	Code	Voltage	Cycle	Phase	Wire	Full Load Amps	Circuit Breaker US (Non-US)	AWG/mm^2	Full Load Amps (Heating Element kW)	Circuit Breaker US (Non-US)	AWG/mm^2
25	C	380-415	50/60	3	3+N+PE	10	15 (16)	14/2.5	9 - 4.2 kW (380 V)	15 (16)	14/2.5
									10.1 - 4.2 kW (415 V)		
									11.6 - 6 kW (380 V)	15 (16)	14/2.5
									13.4 - 6 kW (415 V)		
									16.2 - 9 kW (380 V)	25 (20)	14/2.5
									18.8 - 9 kW (415 V)		
									20.8 - 12 kW (380 V)	30 (25)	14/2.5
									24.3 - 12 kW (415 V)		
	N	440-480	50/60	3	3+PE	4.1	10 (6)	14/2.5	16.8 - 12 kW (440 V)	25 (20)	14/2.5
									19.8 - 12 kW (480 V)		
	P	380-415	50/60	3	3+N+PE	4.1	10 (6)	14/2.5	7.4 - 4.2 kW (380 V)	10 (10)	14/2.5
									8.6 - 4.2 kW (415 V)		
									10.1 - 6 kW (380 V)	15 (16)	14/2.5
									11.9 - 6 kW (415 V)		
									14.7 - 9 kW (380 V)	25 (20)	14/2.5
									17.3 - 9 kW (415 V)		
									19.3 - 12 kW (380 V)	30 (25)	14/2.5
									22.8 - 12 kW (415 V)		
	Q	200-240	50/60	3	3+PE	Not Available			11.1 - 4.2 kW (208 V)	15 (16)	14/2.5
									14 - 4.2 kW (240 V)		
									14.8 - 6 kW (208 V)	25 (20)	14/2.5
									18.9 - 6 kW (240 V)		
									21 - 9 kW (208 V)	30 (25)	14/2.5
									27.1 - 9 kW (240 V)		
	X	200-240	50/60	1/3	2/3+PE	10	15 (16)	14/2.5	Not Available		

Table 6 (Continued)

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Table 6 (Continued)

Voltage Designation						Standard			Electric Heat		
Model	Code	Voltage	Cycle	Phase	Wire	Full Load Amps	Circuit Breaker US (Non-US)	AWG/mm²	Full Load Amps (Heating Element kW)	Circuit Breaker US (Non-US)	AWG/mm²
30	C	380-415	50/60	3	3+N+PE	10	15 (16)	14/2.5	20.8 - 12 kW (380 V)	30 (25)	14/2.5
									24.3 - 12 kW (415 V)		
									25.3 - 15 kW (380 V)	40 (32)	14/2.5
									29.7 - 15 kW (415 V)		
									29.9 - 18 kW (380 V)	40 (40)	12/4
									35.2 - 18 kW (415 V)		
									34.4 - 21 kW (380 V)	50 (40)	12/4
									40.6 - 21 kW (415 V)		
	N	440-480	50/60	3	3+PE	4.1	10 (10)	14/2.5	16.8 - 12 kW (440 V)	25 (20)	14/2.5
									19 - 12 kW (480 V)		
									20.7 - 15 kW (440 V)	30 (25)	14/2.5
									24.5 - 15 kW (480 V)		
									24.7 - 18 kW (440 V)	40 (32)	12/4
									29.2 - 18 kW (480 V)		
									28.6 - 21 kW (440 V)	40 (40)	12/4
									33.9 - 21 kW (480 V)		
									32.5 - 24 kW (440 V)	50 (40)	12/4
									38.5 - 24 kW (480 V)		
	P	380-415	50/60	3	3+N+PE	4.1	10 (10)	14/2.5	19.3 - 12 kW (380 V)	30 (25)	14/2.5
									22.8 - 12 kW (415 V)		
									23.8 - 15 kW (380 V)	40 (32)	12/2.5
									28.2 - 15 kW (415 V)		
									28.4 - 18 kW (380 V)	40 (40)	12/4
									33.7 - 18 kW (415 V)		
									33 - 21 kW (380 V)	50 (40)	Not Available
									39.1 - 21 kW (415 V)		
									39 - 24 kW (380 V)	50 (50)	10/6
									46 - 24 kW (415 V)		
	Q	200-240	50/60	3	3+PE	Not Available			27.2 - 12 kW (208 V)	40 (40)	12/4
									35.3 - 12 kW (240 V)		
									33.3 - 15 kW (208 V)	40 (50)	12/4
									43.5 - 15 kW (240 V)		
									39.5 - 18 kW (208 V)	50 (63)	10/6
									51.8 - 18 kW (240 V)		
	X	200-240	50/60	1/3	2/3+PE	10	15 (16)	14/2.5	Not Available		

Table 6 (Continued)

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Table 6 (Continued)

Voltage Designation						Standard			Electric Heat		
Model	Code	Voltage	Cycle	Phase	Wire	Full Load Amps	Circuit Breaker US (Non-US)	AWG/mm²	Full Load Amps (Heating Element kW)	Circuit Breaker US (Non-US)	AWG/mm²
33	C	380-415	50/60	3	3+N+PE	12	15 (16)	14/2.5	21.8 - 12 kW (380 V)	30 (25)	14/2.5
									25.3 - 12 kW (415 V)		
									26.3 - 15 kW (380 V)	40 (32)	14/2.5
									30.7 - 15 kW (415 V)		
									30.9 - 18 kW (380 V)	40 (40)	12/4
									36.2 - 18 kW (415 V)		
									35.4 - 21 kW (380 V)	50 (40)	12/4
									41.6 - 21 kW (415 V)		
	N	440-480	50/60	3	3+PE	4.9	10 (10)	14/2.5	17.2 - 12 kW (440 V)	25 (20)	14/2.5
									20.2 - 12 kW (480 V)		
									21.1 - 15 kW (440 V)	30 (25)	14/2.5
									24.9 - 15 kW (480 V)		
									25.1 - 18 kW (440 V)	40 (32)	12/4
									29.6 - 18 kW (480 V)		
									29 - 21 kW (440 V)	40 (40)	12/4
									34.3 - 21 kW (480 V)		
									33 - 24 kW (440 V)	50 (40)	12/4
									39 - 24 kW (480 V)		
	P	380-415	50/60	3	3+N+PE	4.9	10 (10)	14/2.5	19.7 - 12 kW (380 V)	30 (25)	14/2.5
									23.2 - 12 kW (415 V)		
									24.2 - 15 kW (380 V)	40 (32)	12/2.5
									28.6 - 15 kW (415 V)		
									28.8 - 18 kW (380 V)	40 (40)	12/4
									34.1 - 18 kW (415 V)		
									33.4 - 21 kW (380 V)	50 (40)	12/4
									39.5 - 21 kW (415 V)		
									40 - 24 kW (380 V)	60 (50)	10/6
									47 - 24 kW (415 V)		
	Q	200-240	50/60	3	3+PE	Not Available			28.2 - 12 kW (208 V)	40 (40)	12/4
									36.3 - 12 kW (240 V)		
									34.3 - 15 kW (208 V)	40 (50)	12/4
									44.5 - 15 kW (240 V)		
									40.5 - 18 kW (208 V)	50/63	10/6
									52.8 - 18 kW (240 V)		
	X	200-240	50/60	1/3	2/3+PE	12	15 (16)	14/2.5	Not Available		

Table 6 (Continued)

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Table 6 (Continued)

Voltage Designation						Standard			Electric Heat		
Model	Code	Voltage	Cycle	Phase	Wire	Full Load Amps	Circuit Breaker US (Non-US)	AWG/mm²	Full Load Amps (Heating Element kW)	Circuit Breaker US (Non-US)	AWG/mm²
35	C	380-415	50/60	3	3+N+PE	10	15 (16)	14/2.5	21.3 - 12 kW (380 V)	30 (25)	14/2.5
									24.8 - 12 kW (415 V)		
									25.8 - 15 kW (380 V)	40 (32)	14/2.5
									30.2 - 15 kW (415 V)		
									30.4 - 18 kW (380 V)	40 (40)	12/4
									35.7 - 18 kW (415 V)		
									34.9 - 21 kW (380 V)	50 (40)	12/4
									41.1 - 21 kW (415 V)		
	N	440-480	50/60	3	3+PE	4.1	10 (10)	14/2.5	17 - 12 kW (440 V)	25 (20)	14/2.5
									20 - 12 kW (480 V)		
									20.9 - 15 kW (440 V)	30 (25)	14/2.5
									24.7 - 15 kW (480 V)		
									24.9 - 18 kW (440 V)	40 (32)	12/4
									29.4 - 18 kW (480 V)		
									28.8 - 21 kW (440 V)	40 (40)	12/4
									34.1 - 21 kW (480 V)		
									32.8 - 24 kW (440 V)	50 (40)	12/4
									38.7 - 24 kW (480 V)		
	P	380-415	50/60	3	3+N+PE	4.1	10 (10)	14/2.5	19.5 - 12 kW (380 V)	30 (25)	14/2.5
									23 - 12 kW (415 V)		
									24 - 15 kW (380 V)	40 (32)	12/2.5
									28.4 - 15 kW (415 V)		
									28.6 - 18 kW (380 V)	40 (40)	12/4
									33.9 - 18 kW (415 V)		
									33.4 - 21 kW (380 V)	50 (40)	12/4
									39.5 - 21 kW (415 V)		
									39.5 - 24 kW (380 V)	50 (50)	10/6
									46.5 - 24 kW (415 V)		
	Q	200-240	50/60	3	3+PE	Not Available			27.7 - 12 kW (208 V)	40 (40)	12/4
									35.8 - 12 kW (240 V)		
									33.8 - 15 kW (208 V)	40 (50)	12/4
									44 - 15 kW (240 V)		
									40 - 18 kW (208 V)	50 (63)	10/6
									52.3 - 18 kW (240 V)		
	X	200-240	50/60	1/3	2/3+PE	10	15 (16)	14/2.5	Not Available		

Table 6 (Continued)

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Table 6 (Continued)

Voltage Designation						Standard			Electric Heat		
Model	Code	Voltage	Cycle	Phase	Wire	Full Load Amps	Circuit Breaker US (Non-US)	AWG/mm²	Full Load Amps (Heating Element kW)	Circuit Breaker US (Non-US)	AWG/mm²
40	C	380-415	50/60	3	3+N+PE	12	15 (16)	14/2.5	21.8 - 12 kW (380 V)	30 (25)	14/2.5
									25.3 - 12 kW (415 V)		
									26.3 - 15 kW (380 V)	40 (32)	14/2.5
									30.7 - 15 kW (415 V)		
									30.9 - 18 kW (380 V)	40 (40)	12/4
									36.2 - 18 kW (415 V)		
									35.4 - 21 kW (380 V)	50 (40)	12/4
									41.6 - 21 kW (415 V)		
	N	440-480	50/60	3	3+PE	4.9	10 (10)	14/2.5	17.2 - 12 kW (440 V)	25 (20)	14/2.5
									20.2 - 12 kW (480 V)		
									21.1 - 15 kW (440 V)	30 (25)	14/2.5
									24.9 - 15 kW (480 V)		
									25.1 - 18 kW (440 V)	40 (32)	12/4
									29.6 - 18 kW (480 V)		
									29 - 21 kW (440 V)	40 (40)	12/4
									34.3 - 21 kW (480 V)		
									33 - 24 kW (440 V)	50 (40)	12/4
									39 - 24 kW (480 V)		
	P	380-415	50/60	3	3+N+PE	4.9	10 (10)	14/2.5	19.7 - 12 kW (380 V)	30 (25)	14/2.5
									23.2 - 12 kW (415 V)		
									24.2 - 15 kW (380 V)	40 (32)	12/2.5
									28.6 - 15 kW (415 V)		
									28.8 - 18 kW (380 V)	40 (40)	12/4
									34.1 - 18 kW (415 V)		
									33.4 - 21 kW (380 V)	50 (40)	12/4
									39.5 - 21 kW (415 V)		
									40 - 24 kW (380 V)	60 (50)	10/6
									47 - 24 kW (415 V)		
	Q	200-240	50/60	3	3+PE	Not Available			28.2 - 12 kW (208 V)	40 (40)	12/4
									36.3 - 12 kW (240 V)		
									34.3 - 15 kW (208 V)	40 (50)	12/4
									44.5 - 15 kW (240 V)		
									40.5 - 18 kW (208 V)	50 (63)	10/6
									52.8 - 18 kW (240 V)		
	X	200-240	50/60	1/3	2/3+PE	12	15 (16)	14/2.5	Not Available		

Table 6 (Continued)

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Table 6 (Continued)

Voltage Designation						Standard			Electric Heat		
Model	Code	Voltage	Cycle	Phase	Wire	Full Load Amps	Circuit Breaker US (Non-US)	AWG/mm²	Full Load Amps (Heating Element kW)	Circuit Breaker US (Non-US)	AWG/mm²
55	C	380-415	50/60	3	3+N+PE	16	20 (20)	14/2.5	22.3 - 12 kW (380 V)	30 (25)	14/2.5
									25.8 - 12 kW (415 V)		
									26.8 - 15 kW (380 V)	40 (32)	14/2.5
									31.2 - 15 kW (415 V)		
									31.4 - 18 kW (380 V)	40 (40)	12/4
									36.7 - 18 kW (415 V)		
									35.9 - 21 kW (380 V)	50 (40)	12/4
									42.1 - 21 kW (415 V)		
	N	440-480	50/60	3	3+PE	6.5	15 (16)	14/2.5	17.4 - 12 kW (440 V)	25 (20)	14/2.5
									20.4 - 12 kW (480 V)		
									21.3 - 15 kW (440 V)	30 (25)	14/2.5
									25.1 - 15 kW (480 V)		
									25.3 - 18 kW (440 V)	40 (32)	12/4
									29.8 - 18 kW (480 V)		
									29.2 - 21 kW (440 V)	50 (50)	12/4
									34.5 - 21 kW (480 V)		
									33.2 - 24 kW (440 V)	50 (40)	12/4
									39.2 - 24 kW (480 V)		
	P	380-415	50/60	3	3+N+PE	6.5	15 (16)	14/2.5	19.9 - 12 kW (380 V)	30 (25)	14/2.5
									23.4 - 12 kW (415 V)		
									24.5 - 15 kW (380 V)	40 (32)	12/2.5
									28.8 - 15 kW (415 V)		
									29 - 18 kW (380 V)	40 (40)	12/4
									34.2 - 18 kW (415 V)		
									33.6 - 21 kW (380 V)	50 (40)	12/4
									39.7 - 21 kW (415 V)		
									40.5 - 24 kW (380 V)	60 (63)	10/6
									47.5 - 24 kW (415 V)		
	Q	200-240	50/60	3	3+PE	Not Available			28.7 - 12 kW (208 V)	40 (40)	12/4
									36.8 - 12 kW (240 V)		
									34.8 - 15 kW (208 V)	40 (50)	12/4
									45 - 15 kW (240 V)		
									41 - 18 kW (208 V)	50 (63)	10/6
									53.3 - 18 kW (240 V)		
	X	200-240	50/60	1/3	2/3+PE	16	20 (20)	14/2.5	Not Available		

Table 6 (Continued)

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Table 6 (Continued)

Voltage Designation						Standard			Electric Heat		
Model	Code	Voltage	Cycle	Phase	Wire	Full Load Amps	Circuit Breaker US (Non-US)	AWG/mm^2	Full Load Amps (Heating Element kW)	Circuit Breaker US (Non-US)	AWG/mm^2
75	C	380-415	50/60	3	3+N+PE	9	15 (16)	14/2.5	32.6 - 18 kW (380 V)	50 (40)	10/6
									37.9 - 18 kW (415 V)		
									37.1 - 21 kW (380 V)	60 (50)	10/6
									43.3 - 21 kW (415 V)		
	N	440-480	50/60	3	3+PE	5.2	15 (16)	12/4	25.3 - 18 kW (440 V)	40 (32)	12/4
									29.8 - 18 kW (480 V)		
									29.2 - 21 kW (440 V)	40 (40)	12/4
									34.5 - 21 kW (480 V)		
									33.2 - 24 kW (440 V)	50 (40)	12/4
									39.2 - 24 kW (480 V)		
	P	380-415	50/60	3	3+N+PE	5.2	15 (16)	12/4	29 - 18 kW (380 V)	40 (40)	12/4
									34.2 - 18 kW (415 V)		
									33.6 - 21 kW (380 V)	50 (40)	12/4
									39.7 - 21 kW (415 V)		
									41.7 - 24 kW (380 V)	60 (63)	10/6
									48.7 - 24 kW (415 V)		
	Q	200-240	50/60	3	3+PE	15	20 (20)	12/4	41 - 18 kW (208 V)	50 (63)	10/6
									53.3 - 18 kW (415 V)		

Table 6 (Continued)

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Table 6 (Continued)

Voltage Designation						Standard			Electric Heat		
Model	Code	Voltage	Cycle	Phase	Wire	Full Load Amps	Circuit Breaker US (Non-US)	AWG/mm^2	Full Load Amps (Heating Element kW)	Circuit Breaker US (Non-US)	AWG/mm^2
100	C	380-415	50/60	3	3+N+PE	14.8	20 (25)	12/4	48 - 27 kW (380 V)	70 (63)	8/10
									51 - 27 kW (415 V)		
									52 - 30 kW (380 V)	70 (63)	8/10
									56 - 30 kW (415 V)		
									61 - 36 kW (380 V)	90 (80)	6/16
									66 - 36 kW (415 V)		
	N	440-480	50/60	3	3+PE	14.8	20 (25)	12/4	36 - 27 kW (440 V)	50 (63)	8/10
									39 - 27 kW (480 V)		
									40 - 30 kW (440 V)	60 (63)	8/10
									43 - 30 kW (480 V)		
	P	380-415	50/60	3	3+N+PE	14.8	20 (25)	12/4	48 - 27 kW (380 V)	70 (63)	8/10
									51 - 27 kW (415 V)		
									52 - 30 kW (380 V)	70 (63)	8/10
									56 - 30 kW (415 V)		
									61 - 36 kW (380 V)	90 (80)	6/16
									66 - 36 kW (415 V)		
	Q	200-240	50/60	3	3+PE	21.4	30 (32)	10/6	66 - 27 kW (208 V)	90 (80)	6/16
									75 - 27 kW (240 V)		

Table 6 (Continued)

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Table 6 (Continued)

Voltage Designation						Standard			Electric Heat		
Model	Code	Voltage	Cycle	Phase	Wire	Full Load Amps	Circuit Breaker US (Non-US)	AWG/mm^2	Full Load Amps (Heating Element kW)	Circuit Breaker US (Non-US)	AWG/mm^2
135	C	380-415	50/60	3	3+N+PE	15.9	20 (25)	12/4	48 - 27 kW (380 V)	70 (63)	8/10
									52 - 27 kW (415 V)		
									53 - 30 kW (380 V)	70 (63)	8/10
									57 - 30 kW (415 V)		
									62 - 36 kW (380 V)	90 (80)	6/16
									67 - 36 kW (415 V)		
	N	440-480	50/60	3	3+PE	15.9	20 (25)	12/4	37 - 27 kW (440 V)	50 (63)	8/10
									40 - 27 kW (480 V)		
									40 - 30 kW (440 V)	60 (63)	8/10
									43 - 30 kW (480 V)		
	P	380-415	50/60	3	3+N+PE	15.9	20 (25)	12/4	48 - 27 kW (380 V)	70 (63)	8/10
									52 - 27 kW (415 V)		
									53 - 30 kW (380 V)	70 (63)	8/10
									57 - 30 kW (415 V)		
									62 - 36 kW (380 V)	90 (80)	6/16
									67 - 36 kW (415 V)		
	Q	200-240	50/60	3	3+PE	25.5	40 (32)	10/6	66 - 27 kW (208 V)	90 (80)	6/16
									75 - 27 kW (240 V)		

Table 6 (Continued)

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Table 6 (Continued)

Voltage Designation						Standard			Electric Heat		
Model	Code	Voltage	Cycle	Phase	Wire	Full Load Amps	Circuit Breaker US (Non-US)	AWG/mm^2	Full Load Amps (Heating Element kW)	Circuit Breaker US (Non-US)	AWG/mm^2
165	C	380-415	50/60	3	3+N+PE	16.2	25 (25)	12/4	49 - 27 kW (380 V)	70 (63)	8/10
									53 - 27 kW (415 V)		
									53 - 30 kW (380 V)	70 (63)	8/10
									58 - 30 kW (415 V)		
									62 - 36 kW (380 V)	90 (80)	6/16
									68 - 36 kW (415 V)		
	N	440-480	50/60	3	3+PE	16.2	25 (25)	12/4	38 - 27 kW (440 V)	50 (63)	8/10
									40 - 27 kW (480 V)		
									41 - 30 kW (440 V)	60 (63)	8/10
									44 - 30 kW (480 V)		
	P	380-415	50/60	3	3+N+PE	16.2	25 (25)	12/4	49 - 27 kW (380 V)	70 (63)	8/10
									53 - 27 kW (415 V)		
									53 - 30 kW (380 V)	70 (63)	8/10
									58 - 30 kW (415 V)		
									62 - 36 kW (380 V)	90 (80)	6/16
									68 - 36 kW (415 V)		
	Q	200-240	50/60	3	3+PE	25.5	40 (32)	10/6	66 - 27 kW (208 V)	90 (80)	6/16
									75 - 27 kW (240 V)		

Table 6 (Continued)

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Table 6 (Continued)

Voltage Designation						Standard			Electric Heat		
Model	Code	Voltage	Cycle	Phase	Wire	Full Load Amps	Circuit Breaker US (Non-US)	AWG/mm^2	Full Load Amps (Heating Element kW)	Circuit Breaker US (Non-US)	AWG/mm^2
200	C	380-415	50/60	3	3+N+PE	18.5	25 (25)	12/4	50 - 27 kW (380 V)	70 (63)	8/10
									54 - 27 kW (415 V)		
									54 - 30 kW (380 V)	70 (63)	8/10
									59 - 30 kW (415 V)		
									63 - 36 kW (380 V)	90 (80)	6/16
									69 - 36 kW (415 V)		
	N	440-480	50/60	3	3+PE	18.5	25 (25)	12/4	39 - 27 kW (440 V)	50 (63)	8/10
									41 - 27 kW (480 V)		
									42 - 30 kW (440 V)	60 (63)	8/10
									45 - 30 kW (480 V)		
	P	380-415	50/60	3	3+N+PE	18.5	25 (25)	12/4	50 - 27 kW (380 V)	70 (63)	8/10
									54 - 27 kW (415 V)		
									54 - 30 kW (380 V)	70 (63)	8/10
									59 - 30 kW (415 V)		
									63 - 36 kW (380 V)	90 (80)	6/16
									69 - 36 kW (415 V)		
	Q	200-240	50/60	3	3+PE	32	40 (32)	10/6	67 - 27 kW (208 V)	90 (80)	6/16
									76 - 27 kW (240 V)		

Table 6

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Electrical Connection

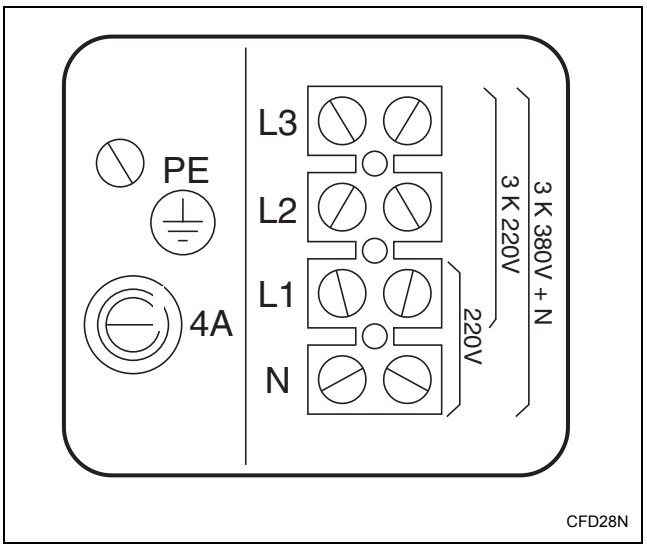

Figure 32

Remove the cover plate at the back of the machine. Using copper conductors only, connect the power cable to the connectors. Refer to the instructions listed on the machine's decal on how to connect the machine.

Machine without Electric Heating

Connect 200-240V single phase (1AC) to the connectors "N" and "L1". The green/yellow grounding clamp has to be the grounding wire "PE".

Machine with Electric Heating

200-240V 3AC

200-240V 3 phase (3AC) should be connected to the connectors "L1, L2, L3". Refer to *Figure 32*.

The green/yellow grounding clamp has to be connected to the grounding wire "PE".

380-415V 3AC + N

380-415V 3 phase (3AC + N) has to be connected to the connectors "L1, L2, L3", the blue neutral to the "N" connector. Refer to *Figure 32*.

The green/yellow grounding clamp has to be connected to the grounding wire "PE".

After electrical installation is complete, run the machine through a test cycle and check for a clockwise basket rotation during the extract step. If rotation is not clockwise, disconnect the power from the machine and have a qualified electrician reverse any 2 motor leads at the AC drive terminal block.

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Remote Liquid Supply Connection

Chemical Injection Supply System

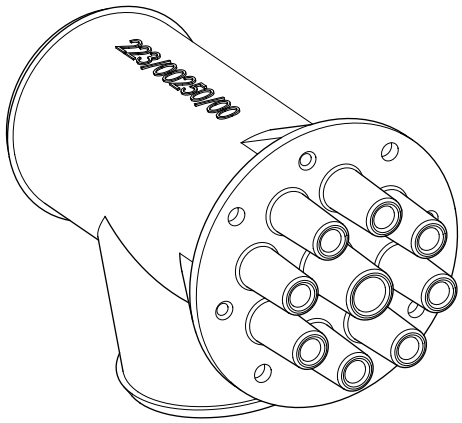
WARNING

Dangerous Chemicals. May damage eyes and skin. Wear eye and hand protection when handling chemicals; always avoid direct contact with raw chemicals. Read the manufacturer's directions for accidental contact before handling chemicals. Ensure an eye-rinse facility and an emergency shower are within easy reach. Check at regular intervals for chemical leaks.

W363

Undiluted chemical dripping can damage the machine. All chemical supply dispenser pumps should be mounted below the machine's injection point. All dispenser tubing should also run below the injection point. Loops do not prevent drips if these instructions are not followed.

IMPORTANT: Failure to follow these instructions could damage the machine and void the warranty.



CONNECTION OF THE LIQUID SUPPLY HOSES

CFS492N

Figure 33

A connection has been placed at the back of the machine. There are nine holes in this connection, through each of which a liquid supply hose can be connected.

CAUTION

Drill out plugs and nipples before making supply hose connection. Failure to do so can cause buildup of pressure and risk a tubing rupture.

W491

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Steam Requirements (Steam Heat Option Only)

WARNING

Never touch internal or external steam pipes, connections, or components. These surfaces can be extremely hot and will cause severe burns. The steam must be turned off and the pipe, connections, and components allowed to cool before the pipe can be touched.

SW014

For machines equipped with optional steam heat, install piping in accordance with approved commercial steam practices. Steam requirements are shown in *Table 7*.

Steam Supply Information			
	18-40	**55-135**	**165/200**
Steam inlet connection, in (mm)	3/8 (10)	1/2 (13)	3/4 (19)
Number of steam inlets	1	1	1
Recommended pressure, psi (bar)	30 – 80 (2.0 – 5.5)	30 – 80 (2.0 – 5.5)	30 – 80 (2.0 – 5.5)
Maximum pressure, psi (bar)	80 (5.5)	80 (5.5)	80 (5.5)

Table 7

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Supply Programming Table

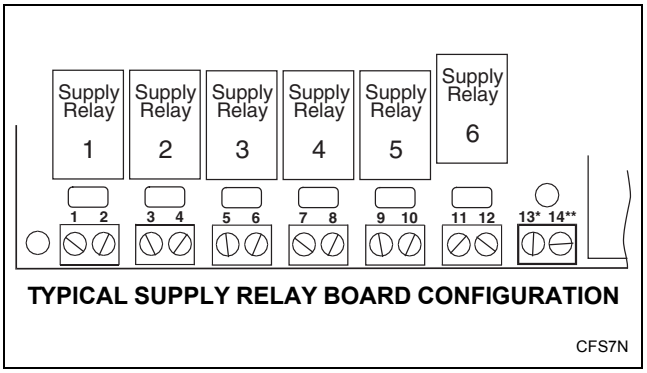
When programming a supply step on the WE-8, choose between 9 different supply steps. Refer to *Table 8*.

Supply 1	Turns on the water valve in compartment A of the supply box.
Supply 2	Turns on the water valve in compartment B of the supply box.
Supply 3	Turns on the water valve in compartment C of the supply box.
Supply 4	Activates supply relay 1.
Supply 5	Activates supply relay 2.
Supply 6	Activates supply relay 3.
Supply 7	Activates supply relay 4.
Supply 8	Activates supply relay 5.
Supply 9	Activates supply relay 6.

Table 8

NOTE: The Supply button is button 6.

Supply Relay Configuration (No Wiring)



* L1 (220 VAC) wire or terminal for remote liquid supply connection.

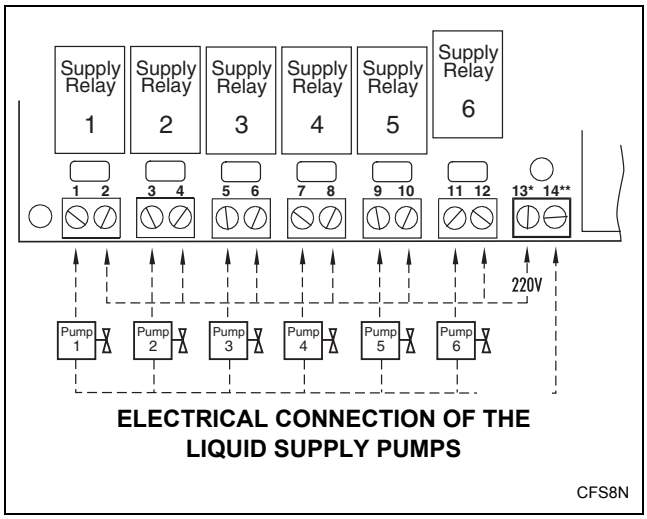
** L2 common wire (220 VAC) or terminal for remote liquid supply connection.

Figure 34

The supply relay board is set up to give NO Voltage AC output to the respective terminals. It is a dry contact closure of the relay. The voltage applied must be supplied with the jumper configurations. Refer to *Figure 35*.

Primary 220 Volt Remote Liquid Supply Connection

IMPORTANT: When programming a supply step, supplies 1, 2 and 3 DO NOT control the relays shown on *Figure 35*. Programming supply 1, 2 or 3 ONLY activates water in compartment A, B or C. Programming supply 4 activates relay 1. Programming supply 5 on the WE-8 will activate supply relay 2, etc. Programming supply 4-9 on the WE-8 will activate supply relay 1-6 on the board, respectively. Refer to *Table 8*.



* L1 (220 VAC) wire or terminal for remote liquid supply connection.

** L2 common wire (220 VAC) or terminal for remote liquid supply connection.

Figure 35

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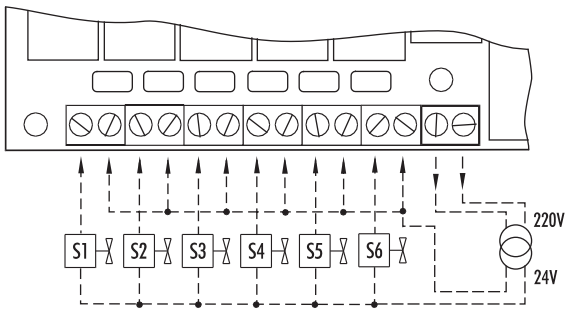
Supply relay 1 controls terminals 1 and 2. *Figure 35* shows the jumper wire from terminal 13 (L1 220 VAC) to all other even pins (i.e., 2, 4, 6…). This applies L1 (220 VAC) to terminal 2. When supply 4 on the WE-8 is programmed, this will close supply relay 1 and apply L1 (220 VAC) through pin 2 to pin 1. This signal is used from the terminal to the chemical supply vendors first pump.

IMPORTANT: Supply 4 must be programmed on the WE-8 to create the signal on terminal 1. The chemical vendor will always use terminal 14 as the common terminal for all pumps. This will apply for the remainder of the 220 VAC circuit for each of the pump signals. For the remainder of the relays, supply relay 2 will control terminals 3 and 4; supply relay 3 will control terminals 5 and 6; etc.

IMPORTANT: The WE-8 must be programmed for supply 4-9 to energize the supply relays 1-6 respectively.

Primary 220 Volt Remote Liquid Supply Connection (Continued)

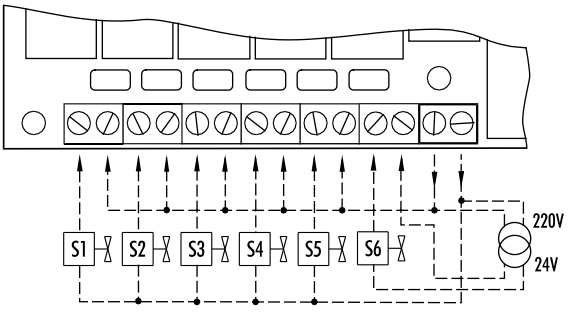


EXAMPLE: PUMPS 24V ~

CFD518N

Figure 36

The 220V can be transformed to other values to drive other type supply pumps.

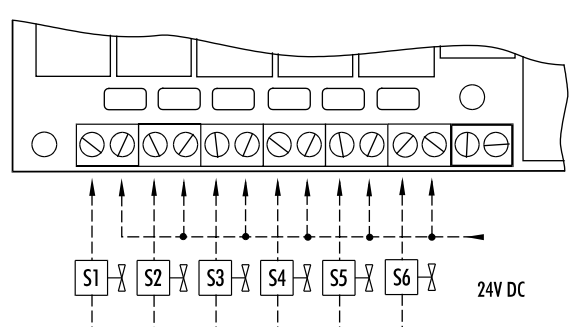


EXAMPLE: 5 PUMPS 220V ~ AND 1 PUMP 24V ~

CFS495N

Figure 37

Also, pumps with different operating voltage requirements can be combined.



WITH AN EXTERNAL 24V DC

CFS496N

Figure 38

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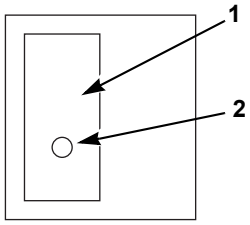
Out-of-Balance Switch



CFS501N

1 Window
2 Probe

Figure 39

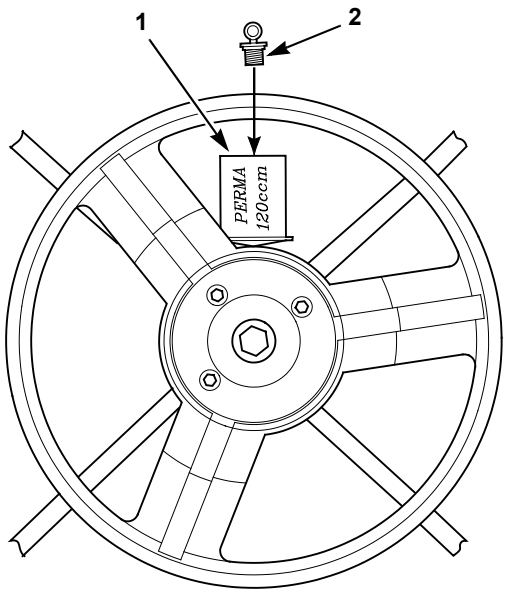
The out-of-balance switch is mounted on the upper right side on the back of the control panel. There is a window around the probe of the switch that is mounted on the movable part of the machine.

When the machine goes out of balance by overloading or uneven distribution of the linen, the out-of-balance switch will interrupt this action to prevent damage to the machine.

IMPORTANT: To guarantee good functioning, the probe should be centered horizontally and vertically at 1/3 from the bottom of the tilt window (when machine drum is empty).

Automatic Lubricator

Only for 75-200 Pound Models



CFS502N

1 Lubricating Device
2 Screw

Figure 40

The bearing house of the machine is equipped with a lubricating device, refer to *Figure 40*, which automatically lubricates the bearing during one year. Upon delivery of the machine, this lubricator has been brought into use. When replacing, please put on the matching screw, refer to *Figure 40*, in the foreseen opening of the lubricator to activate.

WARNING

Ignoring this instruction will inevitably cause damage to the bearings and void the warranty!

W492

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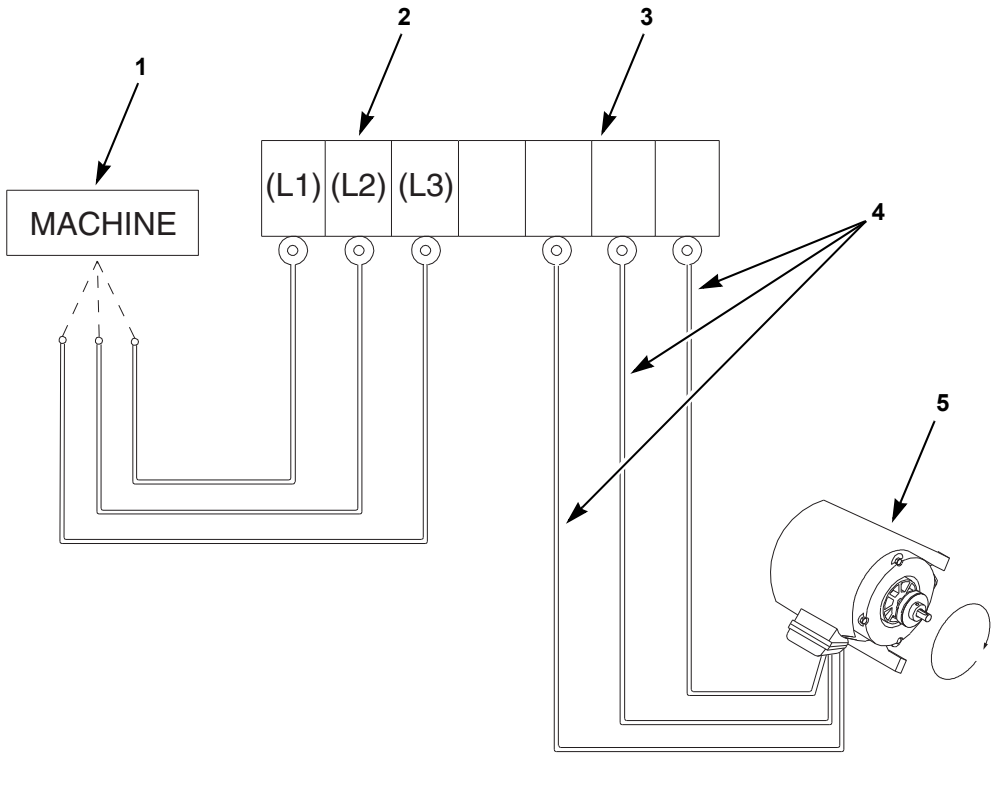
Control Function Test

The machine should be cleaned after the installation is complete. A function test should then be executed on the unloaded machine:

1. Verify that power supply voltage and phase are correct in accordance with the machine's requirements.
2. Open manual shut-off valves to the machine.
3. Press the Emergency Stop button.
4. Apply power to the machine.
5. Release the Emergency Stop button.
6. Check the door interlock before starting operation:
   a. Attempt to start the machine with the door open. The machine should not start.
   b. Close the door without locking it and attempt to start the machine. The machine should not start.
   c. Attempt to open the door while a cycle is in progress. The door should not open.

   If the door lock and interlock are not functioning properly, call a qualified service technician.
7. For standard processing, select Cycle 01 by pressing key 0 and key 1 on the keypad. Then press the Start key (or run factory test cycle 39 by pressing key 3, key 9 and Start key).

   Run a complete cycle, checking operation of water inlet valves, drain, and extract functions.
8. Cylinder rotation must be clockwise in an extract step for all models. If rotation is not correct, disconnect power. A qualified electrician must reverse any two motor leads between the AC drive and the main drive motor. Refer to *Figure 41*.



1	Power Supply	**4**	Motor Leads (Swap any 2 of the 3 motor leads to change rotation direction)
2	Typical Connection (See machine schematic or invertor drive for details of electronic connections)	**5**	Main Drive Motor
3	AC Drive Connections		

Figure 41

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